Trees for Rural Cemeteries.

IN the course of our last volume we offered a few suggestions on the laying out and arrangement of cemetery grounds, and promised to follow up the subject with remarks on trees suitable for their embellishment. We have been reminded of this promise by several letters now on our table, and we proceed to redeem it.

First of all, we must observe that there are people who seem to regard trees as not being among the appropriate and indispensable ornaments of the cemetery. They erect massive vaults and monuments of granite or marble, and plant neither tree, shrub, nor flower near them. This taste, if we may so call it, we can not admire. Trees, it seems to us, are of all others the most appropriate ornaments for the tomb; the shade and shelter which they impart are soothing and agreeable, and there are ideas suggested by their outward forms and moral and historical associations, which address themselves to the reflecting, intelligent mind, quite as forcibly and distinctly as do lettered inscriptions on marble. The literature of all nations has given a language to trees and plants and flowers, and made them symbolize in one way or another nearly every feeling and sentiment of the human heart. Especially is life, death, and immortality, represented by their varied forms and characters, and ever-changing aspects and conditions. As gardening and arboricultural taste increases among us, the literature of trees and plants — the most refining and delightful of studies — will receive more attention, and the work of planting and embellishing grounds will become much more of an intellectual and poetical labor than it now is.

The man who values his trees or plantations merely for their contributions to his physical wants or luxuries, is to be pitied, even in this eminently utilitarian age. For our own part, we love the trees we have planted, as we love our children; and when we gather their fruit, or loiter beneath their branches, we are carried back through the days that have passed since we committed their roots to the earth, and set them out on their journey of life. We think how they and ourselves have jogged along and grown old together, and we almost hear them speak to us with the affection of a brother or a sister. Who can look upon the tree planted by the tomb of a friend, without reading in it the history and recollections of the past, and becoming attached to it as he would to some precious souvenir.

We repeat that there can be no more fitting ornament or memorial placed beside the grave, than suitable trees. And here we call to mind GRACE GREENWOOD'S allusion to the grave of the poet KEATS, in the Protestant burying-ground at Rome. "I was pained, says she, "to find the grave of KEATS in a bare and shadowless place. He, whose heart was so full of music, who loved beauty so passionately, has not a tree to shelter a bird over his lonely rest—not a flower to breathe a perfumed sigh over his lonely pillow." Many a grave is in the same shadowless condition; not from necessity alone, but from neglect and choice.

It is very painful to see the bare and desolate aspect of the quarter set apart for the graves of the poor, in some of our cemeteries. The trifling expenditure of a few dollars in planting a tree here and there over it, would be a wonderful improvement, and would at least show that the authorities considered that these poor, who had no friend behind to raise a monument or plant a tree by their grave, were nevertheless human beings.

In what we have said we do not wish to be understood as raising objections to the practice of erecting monuments to the memory of the dead; far from it. We care not how costly and magnificent they may be, provided they are appropriate to the place and the purpose, and do not convey the idea of a vulgar and heartless exhibition of vanity, as we regret to say they sometimes do. The finest tombstones or monuments strike us as bare and unfinished, without the accompaniment of trees, and especially such trees as in their form and character harmonize with their style. We have a very simple illustration of the effect of trees in the vignette at the head of this article. Take away the tapering trees which support it, and we would have a square block, formal and shadowless, without a line of beauty.

There is something about the memorials which genuine affection places around the grave, so touching and so beautiful as to be readily distinguished from the mere display of wealth, or the cold, formal discharge of a duty imposed by the customs of society. A handful of fresh flowers scattered over a grave—the planting of a bunch of Violets, or a Rose bush—never fails to strike us as a sincere and delicate tribute of affection; while we often, though perhaps uncharitably, question the motives that have raised a splendid monument, and inscribed the fulsome and flattering epitaph.

We have said more on this head than we intended, and must come to the more immediate purpose we set out with.

The selection of trees for the embellishment of a cemetery, calls for the exercise of much taste and discrimination, and should never be undertaken by persons who have but little knowledge of the subject. *Fitness* is every where one of the chief sources of beauty. The burial place has a character and expression peculiarly its own; and whoever undertakes to improve or embellish it, either with objects of nature or art, should be very careful to avoid anything out of harmony with that expression. How we would be shocked to see people visit the house of mourning in the gay costume of the ball-room. So the embellishments of a lawn, pleasure-ground, or flower-garden, would not be a becoming drapery for the tomb. People are very apt to select such trees as they happen to be acquainted with; and therefore we find Elms, Maples, Horse Chestnuts, and other like trees, such as are commonly planted on streets and

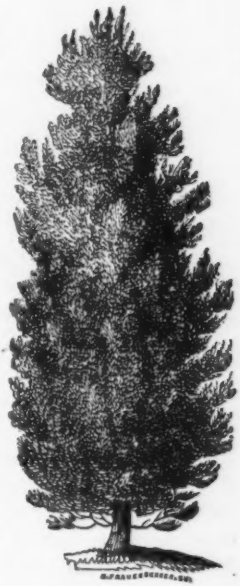
lawns, crowded together on small cemetery lots, where they are entirely out of place. We lately saw no less than sixteen Mountain Ash planted in parallel rows on a lot about thirty or forty feet square.

Very grave errors are committed in planting too many trees, as well as in planting unsuitable kinds. People allow themselves to be deceived by the small size of the trees when they plant. Norway Spruce, and other evergreens of the largest size, one or two feet high, planted ten feet distant, look to be far enough apart; but in a very few years they must be thinned out, or they will encroach upon and injure each other. Very few, however, have the forethought or courage to thin; and therefore the trees grow up in a tangled, unsightly mass. We think it must be obvious to any one who will reflect upon the matter, that the narrow limits of a cemetery lot of the usual size is not the place for trees of the largest size. They may be very properly applied to filling up borders and such places as are devoted entirely to plantations. Two or three well chosen trees, properly placed and carefully cultivated, with a good, thick, closely mown carpet of grass, will always give an appropriate and beautiful appearance to a small lot. A few of the more becoming flowers may of course be added — such as a white Rose, a few bunches of sweet Violets, or Daises — the associations of which are in harmony with the place.

Evergreens should enter largely into the ornaments of the grave-yard. In summer they have a quiet and sombre hue; and in winter they impart a certain degree or warmth and cheerfulness, which relieves the gloomy and desolate aspect of nature at that season.

There are cases, however, above all rules. For instance, when a deceased friend may have been a particular admirer of certain trees, shrubs, or flowers, affection might prompt us to plant them by the grave, even if they were not of the most suitable character. Other circumstances may justify similar exceptions, provided always they are not ludicrous, as many conceits are.

The Arbor Vitæs and Junipers furnish some very suitable small sized trees. Our *American Arbor Vitæ* (*Thuya occidentalis*) is a handsome, spiry-topped tree; but the color is too dull, even in summer, and therefore objectionable. It is now, we observe, much used in Greenwood for hedges to inclose lots; and it answers this purpose very well, as it bears any degree of shearing or clipping that may be necessary.



CHINESE ARBOR VITÆ.

As an ornamental tree, we prefer the Chinese species, (*Biota orientalis*,) being more compact in growth, and of a much better color in summer, although it turns rather brown at the north in winter. The branches when young have a spreading habit, but as it grows older they become erect. It forms a tree fifteen to

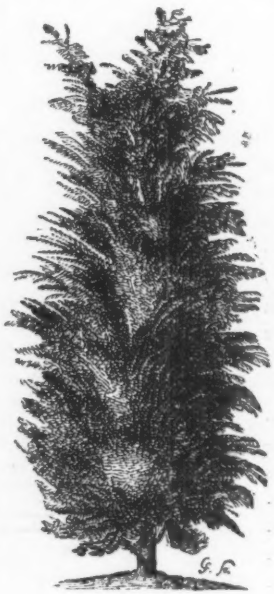
twenty feet high, and quite narrow. It also bears clipping well, and may be kept as small as desirable. It is hardy as far north as lat. 42°, but not much farther. We can not recommend a tree for a cemetery unless it be perfectly hardy, as so few would be willing to take the trouble to give protection, as is done to half-hardy trees in pleasure-grounds.

The *Siberian Arbor Vitæ* (*Biota Tartarica*) is a species or variety not very widely disseminated, but we think the best of all. It is very compact, perfectly pyramidal, and of a fine color. Hardy in any part of this continent.

The *Golden Arbor Vitæ* (*Thuya aurea*) is a very handsome variety of the Chinese, we believe, with a light yellowish-green tint.

There are several others which we have not tested so fully as to be able to speak decidedly of their merits.

Among the Junipers our *Red Cedar* (*Juniperus Virginiana*) is well known, being indigenous to many parts of the country. It is a tree that varies greatly in habit when grown from seed. Some on our grounds are compact pyramids, as regular and stiff as though they had been shorn; while others are loose and straggling, with drooping branches; some light, and others dark green: and all from the same seed-bed. In all cases we consider it a fine evergreen tree, of small or medium size.



TALL JUNIPER.

The *Tall Juniper* (*Juniperus excelsa*), which is said to have been found in Siberia, on the Rocky Mountains, and on the Himalayas, is an elegant, erect, tapering tree, which attains the height of twenty or thirty feet. When young the branches are upright, but as it grows older they spread. It is quite hardy at New York. The foliage is of a silvery or glaucous green. It is strange this tree has not been more extensively cultivated.

The *Common Juniper* (*Juniperus communis*) forms a handsome, erect tree, twelve to eighteen feet high, with rather open, spreading branches. Foliage sharply pointed; dark green underneath, and silvery above.

The *Swedish Juniper* (*Juniperus Suecica*), supposed to be a variety of the preceding, is more compact and formal in its growth.

The *Irish Juniper* (*Juniperus Hibernica*), also supposed to be a variety, is remarkable for its tapering cylindrical habit, like the Irish or Upright Yew. This we consider one of the best of all the Junipers for planting on small cemetery lots; but it is not perfectly hardy in all parts of the country. It stands unprotected at Rochester in sheltered situations, but suffers when fully exposed. It grows slowly.

The *Weeping Common Juniper* (*Juniperus communis pendula*) is a variety with

drooping branches; the young shoots hang perpendicularly downwards. We have not yet seen good specimens in the open ground, but think it must be a very graceful tree, and most appropriate for cemeteries.

There is also a weeping variety of the *Red Cedar*, (*Juniperus Virginiana pendula*,) which has been sent us from Europe. It is a remarkable tree, and must have a very graceful appearance; but we have not yet seen a large, well grown specimen, and can not therefore recommend it decidedly.

The *Chinese Juniper* (*Juniperus Chinensis*) is a very handsome, compact, little tree, which proves perfectly hardy here, and keeps its color remarkably well all winter.

There are many more interesting species and varieties of Juniper, but those we have mentioned are the principal ones which we would recommend to the attention of persons selecting trees for cemeteries. The common Juniper and the Red Cedar bear the shears well, and make fine green walls and hedges. By tying in the branches, and clipping, they may be trained into the most formal figures, or kept within very narrow bounds.

The Yews, from their wonderful longevity, and their dark, unchanging verdure, have a sombre and solemn expression which belongs to no other tree, and which in all ages has caused them to be regarded as the most fitting ornament for the church-yard. There are specimens now in existence that are almost as old as the world, or at least so old that their history appears somewhat fabulous. Their growth, however, is very slow.

ENGLISH YEW.

The *English*, or *Common Yew*, (*Taxus baccata*,) forms a compact, bushy tree, quite hardy as far north as Rochester, and its color remains unchanged by the winter. It thrives best on good, deep soil.

The *Irish*, or *Upright Yew*, (*Taxus erecta*, or *Hibernica*,) is a curious, erect, cylindrical tree, no wider at the height of twelve or fifteen feet than at the bottom. It is much less hardy than the preceding, requiring protection here. It is a tree that should be planted wherever it can endure the climate.

The *American Yew* (*Taxus Canadensis*) is a handsome, low, spreading tree, less erect, and with smaller, narrower foliage, than the English, or Common Yew. It abounds in the shade of the forest, in dry, rocky situations, and thrives very well in the open ground, but partially loses its verdure in winter. It should always have shade where practicable.

IRISH OR UPRIGHT YEW.

All the Yews succeed well in the shade of other trees. Beautiful hedges may be made of either the English or American, as they bear clipping or shearing to any extent. There are many new varieties of Yew recently introduced, but we can not speak satisfactorily of their merits from the small specimens we have seen. A weeping variety of the English Yew, with broader leaves and drooping branches, promises to be an acquisition to the class of trees we are now considering.

From these three genera of evergreen trees — the Arbor Vitæs, Junipers, and Yews — a selection of beautiful and appropriate trees may be made. Where larger trees can be planted, the *Hemlock* (*Abies Canadensis*) is one of the most elegant trees — branches gracefully drooping, and the foliage dark green at all seasons. The *Balsam Fir* (*Abies balsamea*) is a handsome, stiff, conical, dark green tree. The *Norway Spruce* (*Abies excelsa*) is a magnificent tree, with drooping or curved branches, and of a pale green color. This tree attains a great size, and requires plenty of space to display its character and beauty.

In the January number of our present volume we noticed a few weeping deciduous trees, and there are others which we shall notice hereafter — some new weeping Birches, Thorns, and others of small size, worthy of attention.

THE WHITE DOYENNE PEAR.*

SYNONYMS: *Virgalieu, St. Michael, Butter Pear, Large Yellow Butter Pear, White Beurré, Beurré blanc, Doyenné, Doyenné blanc.*

THIS is one of the oldest, most widely known, and extensively cultivated Pears. Its importance in this country far exceeds that of any other variety, the largest Pear orchards in this State, and perhaps in the Union, being planted with it exclusively. The revenue derived from its sale in our markets amounts probably to as much as that of all other varieties combined. We need, therefore, offer no excuse for giving a portrait of it, even if it be well known to a large number of our readers. It can not be too well known, nor too highly prized.

In the Western States it is succeeding admirably, as far as we have heard of its being tested; and we have not the least doubt but that it will there become what it now is in Western New York — the most profitable and popular Pear for extensive culture. On the sea-board, for a long time it cracked, and was entirely worthless. KENRICK, some twenty years ago, classed it among Pears of "indifferent quality;"

* See Frontispiece.

but latterly the Boston and other eastern growers have produced it in the greatest perfection. At the shows of Worcester, Boston, and other places, for a year or two past, the contributions of this variety have been such as to excite general remark and admiration. This is partly owing to superior culture and management, and partly to the use of Quince stocks.

The name "*White Doyenne*" has been generally adopted since the publication of "*Downing's Fruits and Fruit Trees of America.*" Previous to that time it was known in New York as the *Virgalieu*, sometimes *Vergaloo* and *Bergaloo*. In the Eastern States it was known as the *St. Michael;* in New Jersey, Pennsylvania, &c., the *Butter Pear*, *Large Butter Pear*, &c. In COXE's work it is described under the name, "*Yellow Butter*, or *Beurre Doréi*, or *St. Michael's Pear.*"

Mr. FLOY, in his last edition of LINDLEY's "*Guide to the Orchard*," published so late as 1846, describes the "*New York Virgalieu*," and gives the following synonyms: *Williamson's Virgalieu*, *Virgalieu*, *Bergaloo*, *Surpasse Virgouleuse*, *Columbian Virgouleuse*, *Columbia*, *St. Michael.* The *White Doyenne* he declares "beyond question" to be a distinct fruit, and goes on to describe minutely the difference between it and the "*New York Virgalieu.*" If Mr. FLOY had committed such errors twenty or thirty years ago, it would have been pardonable; but that he should do it in 1846, is certainly surprising. To make the *White Doyenne* and *Virgalieu* different, is bad enough; but to make this and *Surpass Virgalieu* and *Columbia* identical, is still worse, because these last named are totally distinct in season, appearance, quality, growth, and *everything.*

The common names in England, among nurserymen and cultivators, are *White Beurre* and *White Butter Pear*, and it is described in several English works under these names; but the London Horticultural Society has adopted *White Doyenne* in their catalogue, and so has RIVERS and others of the more intelligent nurserymen. In France it is known both as *St. Michael*, *Beurre d' Oree*, and *Doyenne blanc.* The latter name prevails in books and the more correct catalogues. *Beurre blanc* in France is a synonym of their "*Bergamot d'ete*" and our *Summer Francreal.* In Belgium it is variously called *Beurre blanc* and *Doyenne blanc;* and in Germany, *Weisse Herbst Butterbirne* (White Fall Butter Pear), and also *Beurre blanc* and *Doyenne blanc*, as in Belgium.

Fruit—variable, both in size and form, according to vigor of trees, stock, &c.: on young trees and on Quince stocks it is usually quite large; while on old trees or Pear stocks it is only medium or small. General form obovate; sometimes roundish, and sometimes considerably pyriform. Surface—pale yellow, becoming deeper and brighter when ripened in the dark; has frequently a blush or dash of bright red on the sunny side. Stalk—about half an inch long, variable, rather stout, slightly sunk. Calyx—small, shallow. Flesh—white, fine-grained, melting, buttery, rich, and delicious. The tree is an erect, handsome grower. Shoots—yellowish-brown, moderately vigorous. Succeeds well, and bears early and abundantly, both on Pear and Quince stock; on the latter stock it is said to do well in some localities where it fails on the Pear.

There are many trees through Western New York, receiving very little care, that

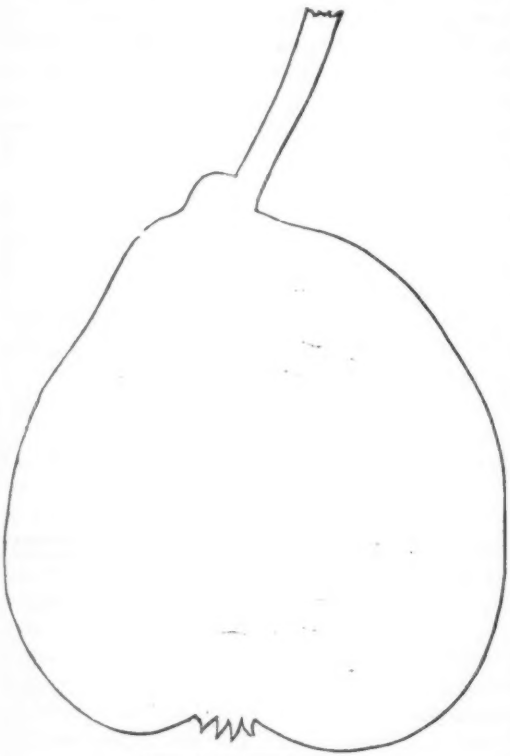
are producing from twenty to thirty bushels of fruit, which commands in any market at least two dollars per bushel.

When desirable to retard its ripening to a late period, it should be gathered late, and ripened in a cool, dark room. In this way it can be kept in fine condition into the month of December, in localities as far or farther north than Rochester.

THE BEURRE VAN MONS PEAR.

BY H. W. TERRY, HARTFORD, CONN.

I SEND you a description and drawing of the *Beurre Van Mons* Pear. Perhaps you will recollect that I exhibited it at the second fruit convention, at Castle Garden; and if I mistake not, I sent you some grafts that season. We have had it in bearing here six years, and esteem it as ranking among the "*best*" Pears.



BEURRE VAN MONS PEAR.

Tree—of tolerably rapid growth. Shoots—vigorous, upright. Young wood—dusky yellow. Leaves—four or five from one bud, like *White Doyenne* or *Flemish Beauty*. Primary leaves—large, oblong, slightly crenulate; footstalks about an inch and a half long. Secondary leaves—narrow, recurved, folded, with short footstalks. Fruit—medium to large, varying much in form. Skin—rough, greenish-yellow, and nearly covered with yellow russet. Surface—irregular, somewhat knobby. Stalk—an inch and a quarter long, with a fleshy base or lip. Calyx—erect, sometimes open, often placed on a singular fleshy ring. Basin—shallow, irregular. Flesh—

rather coarse, juicy, melting, rich, slightly acid, mingled with sweet, and a peculiarly fine aroma. Season — October to middle of December. It grows very finely on Quince, is a good and regular bearer, and the fruit is equalled by few autumn Pears.

CURRANTS.

BY JOHN SAUL, WASHINGTON, D. C.

Were we to search through the whole catalogue of fruits, we could not find one possessed of so many sterling good qualities as this; and yet how much neglected. I was much pleased with the plate in the January number, accompanied with the editor's excellent remarks. Well has he described the little regard paid either to its planting, after culture, or the improvement of the race. In the latter particular I know of no fruit more susceptible of improvement. We have Reds of various shades of color and length of bunch; some very acid, others again agreeably sweet. There are Whites with fine long bunches, yet wanting the flavor of the old small variety. While we have now Blacks with fair sized bunches; I say fair sized, for Blacks are not yet what they might be. What an extensive field for the hybridist — one that promises a rich reward; for we have size, flavor, and color. With such materials to blend together, the skillful hybridist can not fail to improve this class of fruits.

Having cultivated for some years several varieties, I will give a list of them, noting what I may consider best.

1. *Champagne.*—In foliage, wood, and habit, this belongs to the Red class. Color delicate rosy-pink, and would appear like a cross between a Red and White, from the color of the fruit; but wood, foliage, and growth, set it down at once among the Reds. This variety is scarce in England. The bunches are small, yet it is much in demand, where known, for preserving.

2. *Red Dutch.*—"Bunches short. This is a sweet, rich, and good Currant." Thus has it been described by Mr. Rivers, in the last edition of his catalogue. When we consider the many good qualities of the *Red Dutch*, it is a free grower, a good bearer, a fair sized bunch, with large, high colored, rich berries; and above all, for jams and jellies it has no superior, if it has an equal. It is one of the best Red Currants.

3. *Red Dutch, Long-Bunched.*—This is a fine long-bunched, large-berried variety of the above. It is later, and rather more acid.

4. *Red Grape.*—A very fine long-bunched variety with large berries, but very acid.

5. *Knight's Early Red.*—Bunches and berries about medium size, moderately sweet. A very good early Currant.

6. *Knight's Large Red.*—Bunches long, berries large, medium season. A fine large Currant, but inclined to be acid.

7. *Knight's Sweet Red.*—A really good, sweet, Red Currant, with long bunches and large berries.

8. *Palmer's Large Red.*—In this we have a very fine, long-bunched, large-berried

Currant; a vigorous grower and an abundant bearer. It is extensively cultivated in some localities in England.

9. *Pitmaston Sweet Red.*—Bunches short, with berries below medium size. This is the sweetest of all the Red Currants. Raised by Mr. WILLIAMS, of Pitmaston.

10. *Victoria, Raby* or *Houghton Castle.*—The bunches are longer than any other variety. A free grower and an abundant bearer. Perhaps on the whole the finest Red Currant known.

11. *Red Striped-leaved.*—A poorly variegated variety of a bad Red Currant. Unworthy of culture, either for its foliage or fruit.

12. *Black Bang-up.*—A good variety of Black. Bunch and berry nearly if not quite as large as *Black Naples.*

13. *Black Naples.*—Considered the best of the Black Currants, and I think deservedly so. Bunches of fair length. Berries large.

14. *New Dwarf Black.*—This variety promises well. It is of more dwarf habit than the other Blacks, and in bunch and berry equal to *Black Naples.*

15. *Green-Fruited Black.*—Wood, foliage, and growth, is that of the Black; while the fruit when ripe is green. In flavor it will not approach the other Blacks. It is a most singular variety, but is worthless as a fruit-bearer.

16. *Variegated-Leaved Black.*—Here again we have a badly variegated foliage, and a poor fruit. Not worth cultivating.

17. *Old White.*—This variety now is but seldom to be met with, the larger varieties having taken its place. The bunches are short; berries small, amber-colored or nearly so, and of higher flavor than any of the other Whites. This should be borne in mind by the raisers of new varieties.

18. *White Dutch.*—Bunches of fair length; berries large, deep in color, and of high flavor. This is a very fine variety; every point considered, perhaps the finest of the White Currants.

19. *White Grape.*—Bunches long; berries large, pale, not quite as high flavored as the *White Dutch.* As a general rule, the closer a White Currant approaches in color to amber, the sweeter and richer in flavor it is, like a finely ripened *Muscat* Grape.

Some of the finest Currants I have ever seen grown were in the Isle of Wight. In Guernsey and Jersey they grow equally fine, more particularly the Reds and Whites. The soil was a strong, adhesive loam, resting on clay, but a well drained bottom. The climate is very genial, and the fruit is not only large and well colored, but finely ripened. In the market gardens about London they are excellently grown and managed somewhat in this way. They are planted in lines at given distances apart—say twenty or thirty feet row from row, and three or four feet apart in the rows. The ground, which is naturally good, is highly manured, and cropped between with vegetables. The plants, after the first year or two—when they commence bearing—are pruned very hard. Perhaps it will be better understood what I mean by hard, when I say the greater part of the young wood is thinned out, and what is allowed to remain is shortened back to two or three inches. By this means the trees are always

kept short, never attaining a greater height than two or three feet. The bushes being low, with well-thinned-out and shortened branches, they shade little or none of the ground, and are cropped up to the bush. These strong manured and well pruned trees produce magnificent fruit, and in great abundance, well remunerating the market gardener for his trouble.*

What will the advocates of no pruning say to this? Yet the Currant, like the foreign Grape, must be pruned, and pruned severely, if fine fruit is wanted. The Black Currant will not submit to this treatment, bearing as it does on the young wood. The latter must be thinned out, and when over-long, moderately shortened. The pruning must be varied to suit the age and vigor of the tree.

There are many soils in which the White Currant will not grow—ground to all appearance of the best description, and in which the other Currants grow finely; yet in these soils White Currants will scarcely live—grow they will not—showing there is something wanting in the soil necessary for the well-being of the plant. Perhaps chemistry could step in to our aid, and tell us what this essential is. Again we meet with soils where the Whites vie in vigor with the Reds—ground which may be to appearance no better than the other. In a general way, it is more particular to soil than either Reds or Blacks, which will grow in almost any.†

THE CULTURE OF CELERY.

BY WILLIAM CHORLTON, NEW BRIGHTON, STATEN ISLAND.

Celery has become so generally admired a vegetable, that a large supply both for market and likewise in every private horticultural establishment, is now an indispensable necessity. This supply is to some extent furnished according to the continually increasing demand; but like many other things of a similar character, the quality does not improve with quantity. We have ample demonstration of this fact in the poor samples which make up the aggregate bulk in each and every green-grocer's stall. The ready sale and remunerating prices for the greatest number, seems so far to have eclipsed the idea of good culture. The requisite care, more ample space, and increased expense of a given quantity, have no doubt counteracted against improvement.

Now, whether this has been or is likely to continue to be a wise policy, is easily proved. At present, the common custom is to tie three and sometimes four heads into one bunch; and the whole of this bundle does not contain more eatable substance than any ordinary family would consume at one meal, the imperfectly blanched portion of each being not more than a foot, and sometimes only six inches in length, with correspondingly small size,—tough, bitter, and unwholesome, each head weighing from a half to three-fourths of a pound. This is about a fair average standard. It is

* Close pruning and high manuring agrees with the Currant just as well in America as in England.—Ed.

† According to our experience the Black Currants require more moisture than either the Red or White. They form immense masses of small, fibrous roots, like the Ash, which absorb moisture like a sponge.—Ed.

true that two such heads can be grown in the same space, and with as little labor and expense, as one of really good quality; but take into consideration the difference of that quality. The stalks of a good sample are blanched two feet, being broad, solid, crisp, perfectly white, and possess an aromatic, nut-like flavor, free from drastic bitterness, and contains from two to three pounds of usable matter. Surely, one head of this is worth as much, to say the least of it, as are the three or four of the above inferior stamp; and as the good one has only cost the same as two of the poor ones, there must be a saving to the market-gardener by resorting to better cultivation. That the above described better quality would command as great a price, weight for weight, requires no argument to prove; and the good housewife would rather purchase one head which would contain more in bulk than the three, at the same price. Besides, regard to health is a matter of some consequence.

Celery in its wild state is a bitter and drastic poison; under cultivation it becomes a wholesome esculent. In a green state it is nauseous to the stomach; but blanched it becomes somewhat carminative and tonic — the injurious combinations are thereby prevented from assimilating in its structure, and we have a most agreeable addition to the list of edibles.

Scientifically, Celery belongs to the well-defined family Umbelliferæ, the structural appearances of which are easily recognizable. Notwithstanding this, the medical properties are very different; for we have the deadly cold Hemlock and the carminative Anise, the nauseating Cynapium and the nutritious Carrot, the poisonous Cicuta and the wholesome Parsnip, placed in close proximity with our present subject, and which is only another kind of Parsley — the *Apium graveolens* of botanists. Its native habitat is along shallow ditches and low, partly submerged edges of swamps, generally not far removed from the sea shores of Britain. In this state it has a very uninviting dark green hue, lies flat near the ground, being bitter and drastic, and is anything but like the pleasing object as we see it while lying cleanly washed and white upon our tables. In a native state it produces nausea and vomiting; and although not very virulent, is nevertheless poisonous, on which account it is well not to eat the green leaves or the stalks unblanched. Some persons may not feel any inconvenience from casually indulging this practice; but if often repeated, the ill effects will most assuredly be felt.

Celery is a biennial plant; that is, the radical leaves are formed the first year, and the second it develops the flower-stem, ripens seed, and dies away. It is only fit for use in the first season, before the flower-stalks are produced, and is only propagated from seed.

In order to make the subject clear, I will divide it into the following paragraphs: *Management of the Seed-bed*, *Planting out*, *Earthing*, *Protection in Winter*, and *Saving Seed*.

Management of the Seed-Bed. — From the beginning to the middle of April is the best time to sow. Prepare a spot of tolerably rich ground by well digging and breaking up the clods with the spade. There is no occasion to use a rake, unless very stony; a good knocking up with the spade is far better, as the soil is left more open

and loose below, in which state the surface will keep damp longer — a matter of importance to seeds which are vegetating. Next take a small hoe, and draw drills about half an inch deep and a foot apart; into these scatter the seed evenly, about so thick that an ounce may sow two rods of ground. After all is sown, go along each drill and cover in with the side of your foot as you pass along, at the same time press down the soil. A little care will enable the operator to make a neat finish in this way, and it is far preferable to rolling all the largest lumps into the drills, as the rake is subject to do. The seeds by this course are all more equally covered, and the soil is in close contact with them.

At this time we generally have a repetition of warm showers, which is sufficient to encourage germination; but if the weather should become very dry, recourse must be had to artificial watering. If so, do not give frequent sprinklings, but a good and careful soaking. Small dribblings from a watering-pot only bakes the surface without dampening below, and does more harm than good.

When the plants are well above ground, look out for weeds; keep all clean, and thin out if too close. Remember that nothing deteriorates the quality of Celery more than a check during growth. Do not begin too early; but when a start is made, keep it going. One way to prevent this check is by timely thinning. Keep each plant asunder from its neighbor; and as they continue to get larger, if still too crowded, remove more. Attend to watering if the ground gets very dry, but not otherwise. By the beginning of July the plants will have obtained sufficient size for transplanting into the trenches, and if thus treated will be stiff and stocky — each of them a good handful, and a very different sample to what is too often seen.

Planting out.—The plot for final planting should have been forecast in the mind, and may have been occupied by some other crop which is already used up. My own practice is to choose a piece wanting in manure, and sow peas in rows six feet distant from each other; and while they are on the ground, plant the Celery midway between the rows. The Peas in this way act as a shade to the newly removed plants, which is of service till they get established; and the previously hungry land, which was most suitable for Peas, is rendered fertile for future crops by the manure used for the Celery. Let the trenches in all cases be six feet apart, which is not too much to allow space to earth up with. Commence by opening six inches deep and eighteen inches wide. Throw the soil neatly on each side, which will raise the surface about two inches, making the trench eight inches deep, into which convey a liberal dressing of well-rotted barn-yard manure — say one barrow-load to each four yards in length. Level and break up well; and when this is accomplished, begin at one end, fork in the manure, and loosen the bottom, bringing up so much soil as will mix with the dung in equal proportions. Afterwards take enough of that which was previously thrown out and fill in another inch. This will serve as a good base to plant in, and keep the injured roots from coming into immediate contact with the manure.

All being now ready, stretch a line along the middle of the trench; proceed to the seed-bed with a basket or some convenient substitute, lift the plants one by one carefully with a trowel, bring away as much earth as they will carry, place them in the

basket, and plant on *each side* of the line, six inches from it. This will give a double row, each being a foot asunder. Let the plants be eight inches apart in the row. In planting, do not use a dibble, but lift the soil up with the hand, place the plant in the hole thus made, fill in again, and pack nicely around it. Hands were made before dibble-sticks were known, and the hardy fingers of the husbandman are not injured by poking them into well loosened mold. As each row is finished, have in readiness the watering-pan, and, unless the weather be very wet, give a good supply of water overhead, which will fix all firmly, and "they will never know that they have been removed."

This will appear a very tedious process to some of our rough-and-tumbles, I am aware; but the end justifies the means, and the extra care bestowed is more than counterbalanced by the greater success afterwards.

There is one point more than all others that I would impress upon Celery growers—namely, *never let your crop cease growing until it is ready for use.* If the intervening spaces have borne a crop of Peas, they will be ready for removal when the Celery has advanced a little in size, and the ground may be then cleared and dug over. However this may be, at this stage loosen up the outsides of the trenches and fill in a little around the plants, during which operation lift up the leaves and press loosely an inch or two of earth around the base of each plant. This will tend to give an upright growth, and prevent bulging at the bottom. If the weather be dry, give a liberal supply of water, not little and often, but a thorough drenching. One good application is worth twenty sprinklings.

(*Earthing, Protection in Winter, and Saving Seed, in next number.*)

PRUNING AND MANAGEMENT OF THE PEACH TREE.*

V. *Winter-disbudding.*

120. This operation is performed at the same time as the winter-pruning and nailing. Although it is but little practiced at Montreuil, I shall notice it lest it should be supposed that we are ignorant of it. It consists in removing with the fingers the wood or fruit-buds that are considered useless, and of which the growth would be likely to absorb that sap which would prove beneficial to the buds retained. On the wood-branches, the eyes that push before and behind are taken off when it is certain they are useless; also some of the double or triple eyes that are often found at their extremities, when it is needful to moderate the strength of the branch. On the fruit-branches, those wood-buds are taken off that are likely to prove prejudicial to the one at their base. This operation should not be performed without due reflection, because, if done rashly, thereby destroying too many eyes, it may prove fatal by reason of the frosts, which often come on unexpectedly. It is always better to have too many than too few eyes. In fact, I do not much approve of winter-disbudding, because the sum-

* Continued from March number.

mer-disbudding is an excellent means of regulating the growth of the tree with much greater certainty; for when it is performed, the more advanced state of vegetation enables us better to distinguish the growths which ought to be removed.

121. The same holds good with regard to removing the eyes from the upper fruit-bearing branches, which, when pushing vigorously, have their bases furnished with several wood-eyes, while their flower-buds are situated towards their extremities; so that in pruning, to have fruit, they must be left long. In such a case, the two eyes nearest the base are retained for successional shoots; and in order that their development may not be prevented, the other wood-buds, between the two lower and the flower-buds, are removed at the winter-pruning, or after they have pushed in spring, as I shall hereafter explain. The first proceeding is without any inconvenience in full-grown trees, where the sap does not flow so strongly; but, in order to make this suppression in young and vigorous trees, it is better to wait till the eyes push young shoots, so that sufficient time for a partial diversion of the sap may be given, thus preventing it from flowing too strongly towards the successional shoot.

VI. *Disbudding, or Removal of Young Shoots.*

122. Disbudding is the suppression of all the useless or badly-disposed shoots and laterals, with the intention of concentrating the sap, of encouraging the growth of the young shoots retained, and of keeping a sufficient space in which to nail them with regularity and symmetry. Disbudding, to produce the best results, should be divided into two distinct operations. The first takes place as soon as all the buds of the Peach tree become developed into young shoots, so as to enable us to know the ones that are unnecessary; it is the operation subsequent to the winter-nailing. The second takes place successively as vegetation proceeds, and applies to the laterals as well as to the primitive young shoots.

123. The first operation is a very good substitute for winter-disbudding, which I do not recommend. It most commonly takes place early or late in May, according as vegetation is more or less forward; but always before the young shoots have acquired too much strength. If we deferred too long, the suppression of the young shoots would cause a great derangement in the circulation of the sap. It is, therefore, very important to make the first removal of young shoots while the latter are herbaceous, and scarcely three-fourths of an inch long. It is performed on the fruit-branches in the case mentioned at 121, and on shoots of the former year which terminate the wood-branches recently pruned. In fact, these shoots, the result of the former year's pruning, will have formed a great number of triple eyes, more especially on strong trees. These eyes, opening at the same time, would produce young shoots, which, if retained, would consume too great a quantity of sap. For this reason, the middle one, which is always the strongest, must be invariably suppressed at the time of its first starting into active growth, preserving only the best-placed of the remaining two, in order that it, and others managed in the same way, may, on their becoming fruit-branches, regularly furnish the principal branches. With respect to double shoots, the same procedure is adopted as in the two latter cases. This first disbudding is of very great

importance for ensuring the beauty which a tree presents when its principal branches are regularly furnished with bearing-shoots, and for the maintenance of an equal growth throughout the tree. It may be performed by the hand on the fruit-branches, and with the point of the pruning-knife on the prolonging shoots of the wood-branches.

124. It is always worse than useless to cause a waste of sap, for the latter is often too scarce in the lower branches. The removal of young shoots in well-managed trees ought, therefore, to be made at different times, as circumstances may require; for if we wait till there be too great a number of young shoots to be suppressed, it might cause the loss of the tree. There are, however, some cultivators who disbud only once, usually in July, and who cut off in one day all the useless young shoots. This is a great error; the absence of fruit-branches in so many Peach trees at Montreuil is almost solely attributable to the removing, at one time, all the useless young shoots and laterals.

The second disbudding is performed with the pruning-knife, cutting off the young shoots that are to be removed, as closely as possible to their insertion.

VII. *On Pinching.*

125. This is a most important operation. It consists in the suppression of the herbaceous extremities of young shoots. These are taken off by pinching them between the nails of the thumb and fore finger. It is done with the view of diminishing the growth of those shoots which push too vigorously; while at the same time the sap that these would have have otherwise appropriated is turned to the advantage of the weaker shoots. Pinching differs from disbudding, inasmuch as it is only a temporary way of checking the excessive growth of a young shoot; while disbudding is its total extinction.

126. For this reason we pinch nearly all the young shoots, the growth of which we find it necessary to moderate, wherever they may be situated; and this is also frequently done with the view of assisting the development of other shoots. Thus we pinch the terminal shoot of a branch that has reached the desired length, in order to stop the sap, and turn it to the advantage of the lower shoots and eyes, a greater development of which is necessary to the end in view.

127. Pinching requires a great knowledge of the mode of vegetation of the Peach tree. It is indispensable for trees on walls, and it is more especially necessary for the upper parts where the sap flows most strongly. This operation is performed at no fixed period, but is done when the tree requires it. It must be several times repeated from the end of April till August, the particular periods being regulated by the state of vegetation in different trees, and by that of different parts of the same tree. When the balance of the tree is threatened, recourse must be had to pinching. It is well, therefore, to watch the progressive indications of the flow of sap; for in consequence of strong shoots resulting elsewhere from its check by the first pinching, the operation frequently becomes necessary on them. Those young shoots, which, by their appearance or position, promise to become very strong, should be pinched before they reach the same length as the others that are less favorably situated, and not so well estab-

lished. The former should be pinched when three or four inches long; the others must be left untouched till they attain the length of from twelve to sixteen inches. In every case we must bear in mind the necessity of preventing the eyes that form on the young shoots, and especially those on their bases, from becoming blind, which might take place if the shoots were allowed to grow too long. We must also avoid, as much as possible, the pinching of them before they are of sufficient length, as it is likely to make them produce laterals. I usually pinch the young shoots behind a leaf, so that the tree does not appear to have undergone the operation; and many cultivators wonder at the regularity and well-balanced strength of its shoots.

128. Some laterals can not be prevented from forming on the young shoots that are retained, and particularly on those which have been pinched. The laterals which push on the leading shoots should, for the most part, be pinched when six to eight inches in length, above the second, or from that to the sixth leaf, according to their strength. On the leading shoots, pinching should be preferred to disbudding, which entirely destroys the origin of the lateral. Pinching, moreover, is favorable to its good organization, by encouraging the eyes that are formed along its base, and which fit it for becoming a fruit-branch on the prolonging shoot when the latter shall have become a wood-branch.

129. It is by no means uncommon for the terminal shoots of fruit-branches, situated on the upper sides of the principal branches, to grow to an extent likely to prove hurtful to the successional shoot. The former must then be pinched, but leaving it so long as not to make too much sap flow to the latter. If this pinching cause some of the eyes to burst into laterals, it must be discontinued, and the shoots must be cut down to the lowest lateral by a summer-pruning. If, in its turn, the young successional shoot acquire too much strength in consequence of these operations, we must endeavor to moderate it by pinching. If, occasionally, some of its eyes push laterals, it may be cut down, by summer-pruning, on a dormant eye; or, if none such exist, on its lowest lateral.

130. With respect to the laterals which break out prematurely on the young shoots, pinching is much more important for those situated on the upper side than for those on the lower. The latter, from having a less flow of sap, do not always require to undergo this operation.

131. Pinching being an operation entirely depending on foresight, it should be well considered; for when carried to too great an extent, its effects are disastrous: therefore I recommend great care to be taken in practising it; and I may say, that on my trees only a third, at most, of the young shoots undergo the operation.

VIII. *Thinning the Fruit.*

132. The danger of frosts, which are often so fatal to the blossoms of the Peach tree, obliges us, at the time of pruning, to retain more flowers than is absolutely necessary; and if the weather be favorable, too many fruits is the consequence. Fructification being a very trying process, the trees might be injured by its being allowed to take place too extensively; therefore an excessive setting of fruit must be

prevented. Nevertheless, in years when only a moderate quantity sets, the thinning should not be made till the month of June, the time that the stone is formed, which is a crisis at which much fruit drops. When those that remain appear secure, the superabundant ones are removed, so as to leave only as many as the tree can bring to perfection, and nourish without exhausting itself. In this operation, the fruits that are too close together are thinned out, so as to distribute the whole equally, and as near as possible at uniform distances, giving the preference to those that are best placed, and of a regular form.

133. We first thin out those fruits that are at the tops of weak branches, or on branches of which the successional shoot appears weak; and there is always a less number left on the lower than on the upper parts, although the former have more flowers. The fruits to be removed must be detached by turning them with the thumb and the two first fingers, without jerking, taking care not to break off those intended to remain. When the growth of the tree is well balanced, the number of fruits left on each wing must be as nearly equal as possible; and if the thinning is well done, a sort of regularity is obtained which would make one believe that they had been placed on by hand. The green Peaches taken off may be turned to account by the confectioners. Notwithstanding the number of fruits dropped and thinned out, I still leave on each square-trained Peach tree, about four or five hundred Peaches, which, from their beauty and nearly equal size, well repay the trouble I take.

134. But in abundant seasons, if we did not thin till the stone is formed, the tree would be weakened. In such a case, the thinning should be made at two different times: the first in June, when all that are evidently superfluous must be thinned out; and the second after there is no danger of their dropping.

135. The greater or less quantity of fruit is a means of equalizing the strength of the different parts of the tree, as will be further explained.

IX. *On Summer-Pruning.*

136. The object of this operation is to remedy any bad results of winter-pruning, of pinching, and of omissions in the disbudding; also to concentrate the sap in the tree, by removing those useless productions which would have to be cut off at the winter-pruning, and which, meanwhile, would have fed on the sap at the expense of others necessary to be preserved.

137. Summer-pruning, which is performed with the sécateur, or with the pruning-knife, as may be requisite, is less applied to the wood-branches than to the fruit-branches, especially when the winter-pruning is well done. The following, however, are some circumstances where it should be employed. When the extremity of a vigorous young shoot has been too severely pinched, the upper eyes usually open at the same time, and several laterals are formed causing great disorder. These are perhaps pinched in their turn, and very often the result is a crowd of young shoots, originating near the same point. Such agglomerations receive the name of *willow stools*; they consume a great quantity of sap, and tend to impoverish the neighboring shoots. In this case, all these injurious shoots must be cut down to one of the lowest and

weakest laterals; and the growing-point must be pinched before there is time to form eyes along the shoot. The consequence is, the sap, finding all outlets at this part temporarily closed, turns into other channels before the former can be re-opened.

138. The removal of any shoot, and particularly that made after the second growth, of August, when the base of the shoot becomes woody, is in fact a summer-pruning.

139. It often happens, in the square form of training, that the upper secondary branches of a completely formed tree make two strong growths in the early part of the growing season, notwithstanding the pinching of their terminal shoots and their laterals. In such a case we must cut back to a weak lateral, which then becomes a fresh leader

140. With regard to the other wood-branches, it is only in case of accident to their extremities, such as breakage by the wind, severe disease resulting from gumming, or from any other cause injuriously affecting the leading shoot, that we must prune back in summer to a lower shoot suitable for succession. In doing this, we must take into account the position of the branches, and their relative force, so as to choose one more or less vigorous, which must afterwards be treated according to circumstances.

141. Summer-pruning is to the fruit-branches what disbudding is to the superfluous shoots. It sometimes happens that, deceived by appearances, we retain some fruit-branches which eventually do not realize our expectations, and which would otherwise have been cut off; they must be cut down on the young shoot nearest to their base, in order to get rid of the useless wood, and to encourage the growth of this young shoot, which is intended to become a fruit-branch next year. This suppression prevents a useless absorption of sap, and it not only prevents confusion, but likewise admits a freer circulation of air. It is also at the summer-pruning that the extremity of the successional shoot is cut down on the lowest lateral of those induced by pinching. In this respect summer-pruning is very important; for it concentrates the sap, and greatly benefits the part retained, which, in consequence, becomes furnished with wood and flower-buds (126).

142. It also often happens that a fruit-branch of the first sort (77, 78,) has been left longer than desirable, in order to prune in winter to a wood-bud; and which fruit-branch at that time had not a pushing-eye at its base, but has since produced one. In that case, although the fruit-branch may be in bearing, we cut it back to the young shoot at its base, in order not to lose the opportunity of thus obtaining the successional shoot.

143. Summer-pruning is performed according as it is found necessary, and every time the shoots are nailed in during summer, until after the fruit has been gathered. The more it is attended to, so much the more is the winter-pruning advanced.

X. *Defoliation.*

144. The object of this is, to remove leaves that shade the fruit so as to deprive it of the amount of light necessary to give it the proper flavor and color.

145. The leaves are taken off at several times. We ought not to commence uncovering the fruit until it is about to accomplish its maturity; that is to say, when the Peaches are nearly at their full size. They are not exposed all at once to the sun, nor are all on the same tree uncovered at one time, at least when not grown for sale,

as at Montreuil. The colder the season, the more leaves are taken off. It must not, however, be forgotten, that an excessive defoliation may prove detrimental to the full development of the fruit; and that, as leaves are essential to the existence of the eyes, or buds, that grow from their axils, it is necessary to cut the leaf with the sécateur, and to retain the petiole, and sometimes a third or half of the leaf, in order to preserve the embryo buds. It is also important not to take off any leaves from weakly shoots, the growth of which requires to be encouraged. Defoliation must be so performed as to assist the maturity and coloring of the fruit, taking care at the same time that it may not prove prejudicial to those young productions that should insure us future crops.

(*To be continued.*)

WILLOWS AND WILLOW CULTURE.

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When we consider the variety of profitable uses to which Willow may be applied, and the extent to which it is cultivated in other countries, the question is suggested, Why has so little of it been grown hitherto in the United States? A satisfactory answer may be found in the following considerations: The most vigorous growers of England, whose succulent leaves present a fine delicate texture, are not able to withstand the drying winds and scorching suns of American summers; consequently the growing is, at the approach of hot weather, either stopped for the season or suspended, until the warm rains of autumn produce an aftergrowth that is so feeble and branching as to be worthless; or, in some varieties, as *Caprea*, the shoots become so rigid and wanting in pliability that they are of little value. *Salix viminalis*, of which more is sold in the London market than of all others, (so popular that it is called *the Osier*,) fails entirely of giving good shoots in this country, although it grows to the size of a tree; and the celebrated *Longskin*, of Nottinghamshire is no better. The *Bedford* or *Dishley* Willow (*S. Russelliana*) and the *Huntington* branch very much, and are quite inferior.

Thus from the failure of the most esteemed varieties of Europe, in consequence of non-adaptation to our climate, a great discouragement arose at the commencement of Willow culture in this country, which has been in operation from the time it was undertaken at the suggestion of the elder Prince to the present day. But that obstacle has been removed, as well as others of scarcely inferior magnitude; and the way to success has become obvious and easy, and the knowledge necessary to secure it as easily acquired as that of any other culture. A few years since a friend of mine found himself surrounded by circumstances which rendered it very desirable that he should cultivate Willow successfully. He diligently set about a thorough investigation of the subject, determined to bring into his service all available elements of success. In furtherance of this object (chiefly through my agency) he imported every

variety of Willow of any note cultivated in Europe, and conducted a suite of experiments with them, in different localities and on various soils. Their economic characters for our climate have been ascertained, and the result is, that among many of considerable value, *three* have been found of such general and particular excellence as to rank them above all others — with one remarkable exception soon to be named.

1st. Forbes' Willow — *Salix Forbyana.*—Hardy and productive, its rods having almost a leathery toughness; but it does not whiten well, and in consequence its usefulness is greatly abridged. For work where unpeeled rods are used, it is most excellent.

2d. Long-leaved triandrous Willow — *S. triandra.* — This whitens beautifully, is very tough and pliable, and grows vigorously with less drainage than any other of good quality. If the soil is very deep, it will grow with almost equal vigor where the ground is very dry; and in addition it has the excellent habit of early ripening the extremities of its shoots, on which account it is quite hardy in high northern latitudes. With our German basket-makers it is a general favorite, particularly for split work. As an ornamental tree it is also deserving of attention.

3d. Purple Willow — *S. purpurea.*—This is the representative of a large class, and appears to be far more valuable for osiers in America than in England, where it is represented as giving shoots of from three to five feet in length. I have standing by me a bundle of its shoots, from cuttings planted last spring, that average more than six feet; and another bundle, from established plants, of nearly ten feet. They were grown with good but not extraordinary culture, and any good field may easily do as well. It is much more fastidious in its habitat than either of the preceding — delights in richness, depth, and moisture, but does not tolerate excess of wetness. When well established, it has but one superior in productiveness, and may easily be made to yield four tons per acre of the most excellent rods, particularly for fine whole work, for which it has no superior. For live fences it is very valuable, and in England is "extensively used for fences for the exclusion of hares and rabbits, as well as cattle, the bark and leaves being so intensely bitter that they will touch neither, while the shoots, being long, tough, and flexible, may be formed into any shape; and a fence of this kind is reckoned little if at all inferior to that made of wire, which, when made close enough to exclude small animals and strong enough to form a barrier against large ones, is very expensive."*

The subject of Willow for fences is so extensive and important, that I shall leave that for an entire article, remarking, by the way, that on the great western prairies it will soon be found to be invaluable, not only for fences, but for shelter from the sweeping winds. A screen of twenty-five feet in height may be grown from Willow cuttings in five years, and at a slightly retarded rate of annual increase until a height of sixty feet is gained; thus almost immediately affording "that shelter which is so indispensable at all seasons of the year, that there is no safety without it."†

* English Flora.

† See very valuable article on "Shelter" in *Horticulturist*, 1853, p. 345, worth a year's subscription to any man engaged in cultivation.

Salix caprea, although of but little consideration as an osier, may claim attention in some other respects. It will grow vigorously in very wet situations, where other Willows will not live, and its large, showy catkins, which it produces very early and in the greatest abundance, furnish food for bees at a time when it is most needed. In Europe, where honey is an important article of produce, it is greatly prized for that purpose, and often makes the entire difference between an abundant yield and an entire failure, by saving the bees from starvation, coming as it does with the first warm weather which calls the bees from their hives, and before any other flowers appear. But in this respect *caprea* is about to be eclipsed by a new variety that by rare good fortune was, in the course of Dr. GRANT's investigations, procured from England, which proves to be a great acquisition, not only in the arts, but as an ornamental tree. It is perfectly adapted to the climate of the United States, and is much more vigorous and productive than any other variety known. Cuttings of the size of a pipe-stem, six inches long, planted last April, made during the season shoots eleven feet long. Its rods are very slender, comparatively, and vary less in size "from butt to tip" than any other with which I am acquainted. "In early spring, before other flowers appear, excepting the *Magnolia conspicua* and *Cydonia Japonica*, this tree is a mass of dazzling bloom, its immense catkins exhibiting all the brightest hues of the rainbow." The remarkable vigor of this Willow, together with its hardiness and beauty, constitute it the best material for live fences that has yet been discovered, where the soil is suited to its growth; for example, on the deep, rich soil of the western prairies, and on the bottoms where fences are liable to be swept off by freshets. It will thrive in *any* soil that is *deep and rich*, and for a garden enclosure I can not conceive any thing more attractively beautiful than a hedge of this Willow. After the gloom of winter has passed, it affords the first cheerfully inviting scene of spring — its gorgeous flowers, covered with bees, filling the air with the joyous murmuring of their music; and its dense, rich foliage, is the last to yield to the saddening influence of early winter. The cultivation of this Willow for hoops may perhaps be worth attention. It will yield once in two years about 40,000 poles to the acre. One whose judgment is worthy of all confidence, writing from England, says that "as an osier it is better than all other varieties," and the experience of the past two years proves it of equal excellence here.

The Willows, according to the system of LINNÆUS, belong to the class Diœcia; and when grown for ornament, male, or staminate plants, should be chosen, for those only have beautiful catkins. But the beauty of Willow does not generally depend chiefly upon its inflorescence; it has a most attractive loveliness all its own, on which I shall delight to dwell when I prepare for the *Horticulturist* an article on Salictums. It is said by eminent botanists, and Dr. WALKER among them, that the female of most varieties is of more vigorous growth, larger size, and greater toughness than the male; and consequently, when cultivated for economical purposes, the female should be chosen. I have not found this opinion sustained by facts in this country, but rather the contrary; and the authority of Sir J. E. SMITH supports the latter opinion.

The stamens of Willow are too variable in number to admit of scientific classification by them, and the protean appearances assumed by the plants during the differ-

ent stages of their growth, as well as the still greater and more permanent changes produced by locality and cultivation, make this family of plants so difficult of discrimination, that although many acute minds have made them their earnest study for more than thirty years, the subject is still involved in considerable confusion; and cultivators, acting under widely differing circumstances, have, to those who do not sufficiently note the diversity, involved the practical management of them in something of the same apparent obscurity. But this arises from such an imperfect view of the matter as those who cultivate the earth have no right to take. A cultivator is a jury of one, with the experience of ages for his common law, taking into careful consideration *all* the circumstances of the case. If we consider the bleak latitude of Scotland, we shall see why SANG and SHIRREFF strenuously insist upon shelter as one of the circumstances indispensable to success. When we look upon England, and regard her "atmosphere of wetness," retentive soil, and the value of land commanding a yearly rent sufficient for its absolute purchase here, we can easily understand why land that is worthless for other purposes is appropriated to the growth of osiers, and also the cause for the expensive system of "laying up into beds." But the extent to which it is grown in England demands an effort of credulity to believe, and that for their own use only — not exporting any. In the extensive fenny districts which abound in several of the counties of England, Willow has served to render ground otherwise worthless of considerable and often of great value; but it is on the many fertile islands of the Thames, that are often entirely devoted to it, and on the deep, rich bottoms that form the borders of the rivers, and are occasionally overflowed by them, that the brightest results are seen — such as make the rich man richer, but are beyond the reach of the poor. The liability to failure of the Willow is less than of any other crop, when planted on such ground as the above.

If I were writing a book instead of a brief essay on the subject, if would be interesting to glance at the history of Willow culture in England, that we might see in what estimation it is held by the people best calculated to appreciate it. Its extensive introduction is of but recent date; for until the wars at the close of the last century cut off the supply JOHN BULL was content to receive his "wicker material and hoops" from the "Dutch boors," and probably would have continued so to the present time, had not necessity turned his attention to the production of it at home. But when it was once undertaken, it was prosecuted with his characteristic energy, as may be seen by reference to the agricultural and horticultural writers of the time, and to the transactions of the various societies. Prize essays were written, and gold medals awarded for the establishment of Willow plantations. Both nature's noblemen and those that "kings have made" earnestly engaged in the work. The doings of "His Grace the Duke of Bedford" alone are embodied in a princely volume, and confer honor upon his title. But after all, the result is best seen by the vast amount of land occupied as osier holts all over the kingdom; and from its history during the past fifty years in England, may perhaps be inferred the best answer to the frequent question, "Will not the business be soon overdone?" In Britain and on the continent, with the exception of an occasional fluctuation, prices have changed but little, and not at all

declined; but in the best fields, and under improved culture, the profits have increased. In the year 1812 the nett profit of some good plantations was stated at £30 to £40 per acre; and in 1852, some as high as £50 per acre. On those plantations where the ground was "fit for nothing else" even under good management, the profit was often as low as £10 per acre; and the writer sensibly remarks that "the judicious expenditure for great care in the cultivation of any crop is generally profitable, but in none more so than in the cultivation of Willow, often yielding a profit of 300 or 400 per cent."—*Sang, G. K.*

I have drawn my illustrations extensively from English culture, because there "the thing is systematically done up." The best and most cultivated minds have given it their long-continued and careful attention; and in such hands there is no difficulty or uncertainty in observing the connection between cause and effect—for on this the value of observation chiefly depends. The aim of cultivation is in every case the same—to surround the plant, in the most economical manner, with all the circumstances favorable to the development of those qualities for which it is grown; and in cultivation, as well as choice of plants, some regard must be had to difference of climate as well as of other peculiar circumstances, of which I shall presently speak. The statistics of American culture, which I have opportunity of knowing, show a remarkable coincidence with the European, but the price is considerably in favor of the American cultivator.

The number of cuttings required for an acre differ widely, according to the end to be accomplished, ranging from ten to thirty thousand; and at the end of five or six years the plantations may be of about equal value planted with the number of either extreme. For large plantations, the best number is probably twelve to fifteen thousand, and not much crop looked for until the end of the second season, and some even prefer to take no crop for market until the end of the third season, when one of great value may be had. In such case, twelve thousand would be the proper number. A crop of considerable value may be had the second season; and for this purpose perhaps fifteen thousand would be chosen. These would be set in rows about three feet apart, and about ten inches distant in the rows. To derive the most pleasure and profit immediate and prospective, from one acre, the plan adopted on the islands of the Thames, or on the borders of the Cam and Trent, would be the one to pursue. The rows should be eighteen inches apart, and the plants ten inches apart in the rows. If the ground is well prepared, and the culture such as it should be, a very beautiful crop may be had, of considerable value, the first year. A small holt of this description I have in my mind's eye as I write, and rods from it are standing by me, giving an average length that would be considered respectable for a well-established field. For this purpose not more than two shoots must be suffered to grow from a set the first season. At the end of the sixth year, alternate stools are to be dug up, leaving the rows eighteen inches apart, and the stools twenty inches distant in the rows. In favorable situations, and where cuttings may be had at very cheap rates, this is undoubtedly the most advantageous mode, and at once makes a field that the eye delights to rest upon.

The cuttings should be prepared in fall or early winter; and if planted in the fall, the ends will form the callosity preparatory to sending out roots. But this advantage is generally more than counterbalanced by their liability to be thrown out by frost, so that spring planting is on the whole to be recommended.

In setting, a small portion only should remain above ground; and the depth to which they should be inserted depends much upon the character of the soil—a light, pervious soil receiving with advantage to a depth that in a very retentive soil would be disadvantageous. The most vigorous growth will be obtained when the strongest roots start from the lower end of the set; and setting so deep that the end does not vegetate, causes a degree of inactivity through the whole plant.

It should be remarked, by the way, that cuttings of vigorous upland growth, that have had an abundance of room, make more vigorous and healthy plantations than those taken from osier holts; and that the wood of one year's growth, with a portion of two year's wood for the lower extremity, make the best of all.

The length of cuttings may vary from seven to fourteen inches for osiers; but for fencing purposes, from eight inches to as many feet, according to the plan adopted.

For growing Willow profitably, the ground should be well chosen, and partially in reference to the varieties to be cultivated—constant requisites being depth of soil, richness, and moisture, but absence of stagnant water. The ground should also be level, or nearly so, and free from obstructions, for convenient tillage. Heavy, retentive soils, deeply worked, even if elevated in situation, are excellent. Deep, rich bottoms, that are overflowed in winter and spring, and occasionally in summer, are very advantageously used for the purpose. On deep, alluvial soil, freed from standing water, but yet so soft that plowing is impracticable, will give enormous crops of *triandra*, requiring no tillage but keeping the weeds down; but on such *purpurea* will not thrive, nor scarcely grow. There are large districts of deep alluvium, often inclining to swamp, in which Soft Maple delights, which, so much drained as to do away with its swampy character, and with no other preparation than removing the trees, may make excellent plantations. The sprouts from the stumps for two years would cause some annoyance, but the stumps themselves would cause but little disadvantage, except by their unsightly appearance, and would rather favor the growth of the Willow. The deep prairies of the west leave nothing to be desired except a sheltering belt of trees, which the Willow can soon furnish. "Natural meadow," composed of a mixture of vegetable and earthy matter, not so adhesive as to be of difficult tillage—such as in *very* favorable seasons might even give a rampant crop of Corn, but it would oftener fail and be given to Buckwheat—with a stream running through, by which it might occasionally be overflowed, would be my ideal of an osier field.

After a few years the Willow so overshadows the ground that the labor of tillage becomes very small. Ground that is not overflowed at any time, should have a little stable manure before planting, (be deeply worked of course,) and at long intervals of four or five years afterwards, or the complaint will be made of deterioration; whereas, if the ground is constantly kept clean, and occasionally enriched, the plantation will increase in productiveness for many years, and afford to the cultivator an amount of

pleasure and profit not to be sought for, unless in the orchard or vinyard, on which time and capital have been largely expended.

The importance of Willow to man has been recognized throughout Europe, from the earliest ages. Among the Romans, as early as the time of Cato, a crop of Willow was considered so valuable that he ranks the salictum (or Willow field) next in importance to the vineyard. And in modern times, Sir I. W. HOOKER observes, "The many important uses rendered to man by the different species of Willow, serve to rank them among the first in the list of our economical plants." Now what I have attempted to indicate by the foregoing hints, is that the Willow plantation is capable of producing great results; but only when managed with the care that is the offspring of knowledge: and that the proper selection of varieties at the outset is all important. As is the management of the salictum or vineyards, so are the profits—*minus*, *plus*, or *plurimus*.

A CHAPTER ON GARDENERS.

BY HORTICOLA.

NURSERYMEN and florists are frequently called gardeners, but in the present case I wish to be understood as meaning *gentlemen's gardeners*. To begin at the beginning, I will first inquire what a gardener is. In scientific phraseology, he belongs to the genus Homo and to the natural order of Menials. If you doubt my assertion, or wish for higher authority as to the correctness of my classification, I refer you to any of the New York papers, where, if you will run your eye down the columns, you will find—

"WANTED—Three cooks, one housemaid, two waiters, four coachmen, two *gardeners*, and a servant of all work."

As the gardener belongs to this family, he is treated by his employer in the same manner as the rest. "And why not?" some of my readers may ask. Who or what is the gardener, that he should be distinguished or held in higher esteem than the rest? I do not wish to reflect, sneer, or in any way speak or write disparagingly of these necessary and useful worthies; they may discharge their various duties with credit to themselves and to the satisfaction of their employers: but the requirements of the gardener I conceive to be of a different and more important character than of the others. He must be a man of mind, capable of thought, foresight, and reflection. He has not only the same amount of manual labor to perform as the other domestics, but his mental powers must be taxed—he must work with head and hands too, or he is no gardener. He is required, perhaps, to produce bunches of well-ripened Grapes in May or June, while the waiter has merely to dish them and carry them to the table: and in the same months, Cauliflowers, Cucumbers, and new Potatoes; while the disciple of Mrs. GLASSE has merely to cook and serve them up. Poor blue-apron has first to "*catch the hare*," which is certainly the most difficult part of the business.

I will next inquire why it is that a gardener is treated like a mere machine,

which in many situations he is. Is the fault his own, or does the blame attach to his employer? I am inclined to think that in very many cases blame ought to rest on his own shoulders. I admit that many good gardeners frequently become careless and indifferent from the fact that their services and ability are not properly appreciated by their masters; but I think one reason why he makes no distinction between the gardener and the other servants, is because he actually can not see any difference, either in address, intellectual acquirements, or anything else. It is to this I would particularly wish to call the attention of the gardener. There is truth in the adage, that "if we wish to command respect from others, we must first learn to respect ourselves;" and I should infer, from the personal appearance of some gardeners, that they have entirely lost all self-respect. It may appear a small affair to some to allude to the subject; but, while I abominate all coxcombry and dandyism, at the same time I do not see why a gardener should not be clean in person and decent in apparel. It is too delicate an affair for an employer to allude to; but I feel assured that many men would hold a higher place in the esteem of their employers, if they paid a little more attention to this.

A gardener ought to be intelligent, and well informed about every thing appertaining to his business. There are many who are well posted up in politics, the price of lots, &c., and who do not know the names even of half the plants under their care, saying nothing of their native habitats, introduction into the country, &c. Others again have I met with (despisers of books, catalogues, &c.,) relying on their own unaided practice, as they say, for their knowledge, who have affirmed that they could tell whether a plant was hardy or tender, by its appearance. I should like to hear the verdict of one of these knowing physiologists on two such plants as *Auracaria excelsa* and *Libocedras Chiliensis*, supposing they had never seen them before.

As regards information from books and practice, the latter I admit is the most important; but at the present day, the gardener who never reads, whatever he may think to the contrary, is most certainly behind the age in which he lives. I know that the majority of gardeners have received only the rudiments of an education; neither have some of the greatest men of the past and present ages — they have been self-taught. What education did Sir Joseph Paxton receive? and now look at the position he holds. Some jealous minds may sneer, and say that had it not been for the patronage of his princely employer he would have been nothing more than any ordinary gardener. I do not believe it; recollect there is no royal road to learning. Doubtless he met with every encouragement, but his success must be mainly attributed to his untiring industry and perseverance. Although I am not personally acquainted with Sir Joseph, I think I have sufficient acquaintance with such a man to warrant the assertion that (if called upon to do it) he would cast his title at her Majesty's feet, and his property after it, rather than sacrifice or be robbed of the knowledge he possesses — the information he has obtained from books, observation, men, practice, &c. Such is the value of knowledge. Of course, in this country a gardener does not expect to receive the honor of Knighthood, but if he will, "a man can be a man for a' that." I do not know of any trade, business, or pro-

fession, which presents more seductive allurements for the acquisition of knowledge, than that of a gardener. There is hardly a tree, plant, or shrub, which he has under his care, but has some beautiful association. Why even the name is suggestive — it reminds us of some eminent person, place, or event. Take one or two plants for illustration — *Gardenia Fortunii*, *Abies Douglasii*, *Tropæolum Lobbianum*, *Acacia Drummondii*. Who are these individuals whose appellations these plants assume; are they alive, or dead; and where did they travel? Some are no more; but the majority are alive, and still actively engaged in the field of operations. The first traveled in China, and has introduced during the past eight years some of the most beautiful plants that ever graced shrubbery or parterre; the second in Oregon, California, &c., and met with an untimely fate; the third in Chili, the Andes, and Patagonia; the last in Australia. If geography was not taught at the school our supposed inquirer attended when a boy, he will of course have but a vague idea of the exact longitude and latitude of the above-mentioned localities. If this is the case, he can borrow, or for a few shillings buy, a good geography, with maps. A few hours each evening for a week, with this before him, and he will become familiar with the above places — not only with the localities, but with the climate, products, natural history, commerce, political institutions, &c. I feel confident that many gentlemen would tender freely the use of their library to the gardener, if he only manifested a desire to avail himself of its benefits. Some of my gardener readers may smile, perhaps, and shake their heads, saying, "You don't catch my boss lending me books to waste his time with." I would say to such "bosses," if such there *are*, that they mistake their own interests. At any rate, I consider that an illiterate, coarse, vulgar man, is an evil on a place, especially where there are children; and such a course of reading that I would recommend, would not, as some may suppose, make him lazy, effeminate, or too sentimental.

We all know how susceptible and plastic the minds of the young are — more inclined to imbibe evil than good. Then children must be frequently out of doors, and in the garden; and they will soon learn, and make use of, all the vulgar slang they may hear from the gardener, or the other men. How necessary, then, it is that he should be a man of good address, moral and exemplary in his character, eschewing everything in the shape of vulgarity that would tend to contaminate or vitiate their taste. Let him converse with them about the plants and flowers, pointing out any remarkable characteristics or peculiarities they may possess; or bring them a nosegay from the woods, the genuine denizens of the place, tell them their names, and the meaning or etymology of these names. By these means he may possibly implant a taste for the study of botany — an accomplishment which it is to be regretted so few young ladies in this country attach to their catalogue of studies. Services and attentions of this kind rendered to the children, would not, I think, in all cases pass unnoticed by the parents.

The education and qualifications of gardeners ought to claim more attention at the present time than it does. Look at the numerous dwellings — country seats — that are springing up like magic in every direction, many of them first class houses, and

grounds corresponding in extent. The best talent the country affords is secured for the building — nay, even Europe perhaps is ransacked for a suitable design; but the garden and grounds — who is to be the architect of these? Alas! too frequently a person called a gardener, who receives for his services $25 per month, with a shanty to live in, and what few refuse vegetables he can pick up after the family is supplied; while perhaps the architect of the building is receiving eight or ten times that amount for the same space of time: and what is the result? Just what ought to be anticipated — the place in all probability divested of its primitive and natural beauty — fine old trees, which stood just in the proper places, cut down, elevations levelled, and other errors perpetrated; all which might have been avoided by the exercise of a little good taste and judgment, which might have been purchased for a few more dollars.

A good gardener, if he aims at landscape gardening, ought to possess the feelings of a poet, and the eye and taste of a good landscape painter. Some of my readers may think that I am now going too far. I do not expect a gardener to be a poet or a painter; but how can a person totally devoid of the above desiderata make a tasteful and judicious disposition of the place — the trees, knolls, dells, glens, shrubs, flowers, &c., so that they blend, contrast, harmonize, and afford for contemplation the greatest amount of pleasure the place is capable of. How can this, I say, be successfully accomplished by a man of uncultivated mind, who is incapable of being impressed by the beautiful in nature and art? Why I have seen some gardeners pass and repass (*without even noticing them*) magnificent specimens of trees, &c., while the same objects would have struck others speechless with admiration. There are many gardeners who partake too much of the Wall street mania, viz., too much absorbed in dollars and cents, to the exclusion of much else which is equally valuable and important; they allow themselves barely enough food to satisfy the demands of nature, and only raiment sufficient to keep them from a state of nudity. Now it is highly commendable in any man, especially a gardener, who is seldom overpaid, to be prudent provident, careful, and even rigidly economical in his expenditures; but when this is allowed to merge into meanness and parsimony, it contracts the soul, and mars and deforms his better nature. Such men can not see beauty or utility in anything unless real profit issues from it in the shape of dollars and cents. A gardener of this character can not afford to take a horticultural magazine, attend an exhibition, or go a few miles to see a fellow gardener or a nursery. "*Cui bono*," says he, "it wont pay." I would ask such a one, what pay or profit the naturalist, the botanist — the real lover of plants — expects, when he travels on foot long miles on hot, summer days, to seek his favorites in their native haunts? Ask one of these devotees, and he will tell you that the smiles of such little gems as Hepatica, Viola, Claytonia, Saxifraga, &c., after a long and dreary winter, afford him as much real pleasure as the welcoming of a loved brother, sister, or any other dear friend, after a twelve-month's absence. But the individual who makes the dollar his idol, is dead to such impressions.

It may be thought by some of my readers that I have been too severe on the gardener, in the foregoing remarks: but it must not be supposed that I class all garden-

ers alike—no, there are not a few who are a credit to themselves and an ornament to their profession; it is to the laggard, the self-sufficient, the drone, the sloven, that I would address myself. 'Tis these, often, who bring obloquy on the rest—one bad gardener will often be the means of bringing disgrace on the fraternity. Rouse up, then, brothers—for I am one of you, (bad or good I do not say,) my interests are identified with yours,—let us see if we can not raise ourselves a little in the social scale. I know one thing, and that is, if we are not the meanest men, we are the meanest paid men of any class in the country, considering what is required of us. But let us examine, and satisfy ourselves that this short pay is not the result of our own short-comings; let those who employ us see that we have *mind and intellect*, as well as bone and muscle. Till they perceive this, they will not consent to place us in any other class than the one we are arranged in at the commencement of this chapter.

ON THE CULTIVATION OF THE TUBEROSE.

BY H. W. TERRY, HARTFORD, CONN.

Deservedly a favorite as this flower is, it is seldom successfully cultivated in the north, both from want of proper care and from the shortness of our season of warmth. I have been very successful in flowering it, having had at one time ninety-six spikes in one bed, early in September. As some of your readers may be willing to take the same trouble for the sake of such a splendid show, I will describe the plan I pursued.

About the 15th of April the bed should be laid out, four feet wide. This will give room for six bulbs in the cross row, at eight inches apart. The rows should be twelve inches from each other, and the bed made long enough to receive the required number of bulbs. Dig out all the earth to the depth of two feet, keeping the sides perpendicular. Be certain that the bottom is well drained, so that no water can stand in it. Fill the bed with hot dung, or, what is better, dung and leaves mixed, treading it down until within four inches of the surface. On this put eight inches of a compost of one-third good garden loam, one-third coarse sand, one-sixth rotted hot-bed manure, and one-sixth leaf mold. The bulbs should be large, plump, and entirely stripped of offsets. Make the holes four inches deep, and put a little white sand in each, so that the top of the bulb shall be an inch below the surface of the bed, and cover them, making the bed smooth. Place on the bed crosswise about four inches of straw, with poles laid lengthwise to secure it against wind. In about a fortnight examine the bed, and when the bulbs have started about two inches, take off the straw and put down some crotches at the sides of the bed to support cross poles on which to place a covering of mats or old carpets at about six inches from the surface of the bed. Remove this every mild day, putting it on at night, until all danger of frost is past. Then place slender sticks, painted green, to each bulb, to tie the flower-stems to. Water plentifully in dry weather.

Foreign Notices.

Spring Flowers in the North of China.—In the north of China there are a number of plants which have their flower-buds very prominently developed in autumn, so much so that they are ready to burst into bloom before the winter has quite passed by, or, at all events, on the first dawn of spring. Among these *Jasminum nudiflorum* occupies a prominent position. Its yellow blossoms, which it produces in great abundance, may be seen not unfrequently peeping out from among the snow, and reminds the stranger in these remote regions of the beautiful Primroses and Cowslips which grow on the shaded banks of his own land. Nearly as early as this, the pretty daisy-like *Spiræa prunifolia*, the yellow *Forsythia viridissima*, the lilac *Daphne Fortunei*, and the pink Judas tree, become covered with blossoms, and make our northern Chinese gardens extremely gay. There are also some good Camellias which flower at this time, but they are generally grown in pots under such shelter as mat sheds and other buildings of a like kind can afford. The double-blossomed Peach, of which there are three very distinct varieties now in England, are perhaps the gayest of all things which flower in early spring. Fancy, if you can, trees fully as large as our Almond, literally loaded with rich colored blossoms, nearly as large and double as Roses, and you will have some idea of the effect produced by these fine trees in this part of the world. On the southwest side of Shanghae there are numerous Peach gardens studded over the country. These are well worth a visit in the month of April, as the trees are then in full bloom, and have a charming effect upon the landscape. It is in this part of the country where the celebrated Shanghae Peach is largely cultivated. On the graves, which are here scattered over all the fields, and appear like huge mounds of earth, I observed many pretty Violets in flower, both white and purple, but all nearly scentless. A little later in the season, that is from the 20th of April to the beginning of May, another race of flowering shrubs and herbaceous plants succeed those I have already named. The most conspicuous among them are *Viburnum macrocephalum* and *dilatatum*, with their large heads of snow-white flowers; *Spiræa Reevesiana*, and the double variety, which is more beautiful than the original species; *Weigela rosea*, now well known in Europe; Moutans of various hues of color; Azaleas, particularly the lovely little "*Amœna*;" *Kerria Japonica*, the lilac and white Glycines, Roses, *Dielytra spectabilis*, and *Primula cortusoides*. It will easily be believed that with such a host of Flora's beauties these Chinese gardens must be gay indeed. But perhaps the most beautiful sight of all is the *Glycine sinensis*, climbing upon and hanging down from other trees. I believe I noticed in my former "Notes" the fine effects produced by this climber when in such situations. I have again observed numerous examples this spring, and can not help drawing attention once more to the subject. The fine plant of this species upon the Chiswick garden wall is much and justly admired, but if you will imagine a plant equally large, or in some instances much larger, attaching itself to a tree, or even a group of trees, entwining itself round the stems, running up every branch, and weighing down every branchlet; and, in the end of April or beginning of May, covered with flowers; some faint idea may be formed of the fine effects produced by the Glycine in its native country. I believe it would not succeed if managed in this way near London, or anywhere in the north; but the experiment would be worth a trial in some parts of Europe, where the summers are warmer than they are in England. As I know you have many readers in the United States of America who are as fond of their parks and gardens as we are of ours, and I can not do better than recommend the experiment to them. Many of our northern Chinese plants succeed admirably in America. China and America are both situated on the eastern side of large continents, they are equally liable to extremes of heat and cold, and consequently the shrubs and trees of one country are almost certain to succeed as well in the other, provided they are reared in the same latitudes, and grown in the same kind of soil.—*R. F., in Gard. Chron.*

Use of Collodion in Propagating Plants.—We breathe an atmosphere of marvels. A few years since the world was astonished by the announcement that so harmless a substance as cotton wool could be made to serve the purposes of gunpowder; and gun cotton was patented for the purpose. Shortly afterwards an ingenious apothecary discovered that gun cotton could be employed to heal the wound it caused, a substance called collodion, the prince of plasters, having been made by dissolving this sort of cotton in ether. And now it appears as if collodion itself were likely to become a new arm in gardening.

Collodion is not merely adhesive, but impenetrable by water, and impervious to air. Taking advantage of these properties, it occurred to Mr. Lowe that in the nice act of propagating plants, this substance might be advantageously employed. It would be unjust to this gentleman if we did not give his statement, as officially made public in the *Proceedings of the Royal Society*, before whom a paper on the subject has been lately read.

It had occurred to him, that if a cutting of a plant were sealed at the base, so as to exclude the moisture of the soil from ascending the stem in injurious quantities, the method of striking cuttings of most species of plants would not be so precarious a process as at present; and accordingly some collodion was obtained in order to make the experiment.

With respect to this new process, he states, that immediately upon the cutting being severed from the parent stem, the collodion was applied to the wound, and then left a few seconds to dry, after which the cuttings were potted in the ordinary manner.

To test the value of this new process more effectually, duplicates of all the species experimented upon were at the same time similarly planted, without the collodion being applied to them.

Experiments were carried on in two different ways; one batch of cuttings being placed on a hot-bed, while a second batch was planted in the open ground, without even the protection of glass.

First Batch.—All of which were placed on a hot-bed on the 1st of September, and examined on the 1st of October:

Stove Plants.

Name of Plant.	Number of Cuttings with Collodion applied.	Number of Cuttings which took root.	Number of Cuttings without the application of Collodion.	Number of Cuttings which took root.
Ixora coccinea,	1	1	1	0
Tacsonia miniata,	1	1	1	1
Franciscea Hopeana,	3	3	3	0
" Pohliana,	3	3	3	0
Gloxinia Maria Van Houtte,	2	0	2	1
Begonia incarnata,	2	2	2	1
Achimenes patens,	8	7	8	6
Hoya bella,	2	2	2	1
Rondeletia speciosa,	2	2	2	1
Allamanda neriifolia,	2	2	2	1

Greenhouse Plants.

Name of Plant.	Number of Cuttings with Collodion applied.	Number of Cuttings which took root.	Number of Cuttings without the application of Collodion.	Number of Cuttings which took root.
Boronia serrulata,	6	5	6	0
Polygala Dalmaisiana,	3	1	3	0
" grandiflora,	6	3	6	2
Verbena luna,	6	6	6	6
Chorozema cordata,	1	1	1	0
Epacris pallida,	1	0	1	0
Leschenaultia formosa,	2	2	2	1
Swainsonia astragalifolia,	1	1	1	0
" galegifolia,	1	0	1	0
Abelia rupestris,	2	2	2	0
Plectranthus concolor picta,	4	2	4	2

Second Batch.—Planted in the open ground on the 1st of September, and examined on the 1st of October:

HARDY PLANTS.

Name of Plant.	Number of Cuttings with Collodion applied.	Number of Cuttings which took root.	Number of Cuttings without the application of Collodion.	Number of Cuttings which took root.
Garrya elliptica,	12	5	12	1
Erica vagans,	12	7	12	4
Bupleurum longifolium,	18	6	18	0
Laurus fœtens,	12	10	12	7
Rose, Souvenir de la Malmaison	6	4	6	3
Taxus baccata, golden-leaved variety,	12	8	12	4

	Total Number of Cuttings to which Collodion was applied.	Number of Cuttings which took root.	Total No. of Cuttings without the application of Collodion.	Number of Cuttings which took root.
First batch,	59	46	59	23
Second batch,	72	40	72	19

The experiment, the author considers, speaks for itself. Notwithstanding the season being too far advanced for the full benefit of the process to be thoroughly observed, still twice as many cuttings took root treated by the new method as had rooted by the old. The mortality in the open ground was increased by slugs having eaten off above the soil some of the cuttings. Those thus damaged were examined after they had been in the ground a month, and it was found that the collodion was quite as sound as when first applied. It would therefore appear that the collodion seals the wound of the cutting, and protects it from the fatal effects of damp, until roots are prepared to force through the covering of gun cotton.

It is further stated that the application of this solution has been found to be exceedingly beneficial in the pruning of such plants as *Euphorbia speciosa, Impatiens latifolia, Impatiens latifolia alba, Hoya bella, Hoya imperialis,* &c., the cut branches being prevented from bleeding.

It is the author's intention next spring to follow out this experiment, in budding and grafting, as he considers that it will also be useful in this branch of horticulture.

Gutta percha, dissolved in ether, was in some instances substituted to heal the wounds caused by pruning; yet owing to this solution not drying as rapidly as collodion, the first, and sometimes the second application was not sufficient.

The effect of these solutions upon cut flowers was very marked. Two branches were gathered as nearly alike as possible; to the flower-stalks of the one, collodion was applied. These flowers were placed in vases filled with water. Those coated over with collodion began to fade in thirty-six hours, and many were quite dead in three days; while the flowers merely placed in water in the ordinary manner remained fresh and healthy. Those that faded soonest were *Reseda odorata* and *Tropæolum majus*, and those which were least affected were *Tagetes erecta* and *Senecio crubescens.*

Want of space prevents further notice of this curious statement at this time, but we propose to take an early opportunity of returning to it.—*Gardeners' Chronicle, London.*

CULTURE OF THE FUCHSIA.—This useful plant is, I fear, seldom employed now for decorating the greenhouse and conservatory, and therefore its cultivation has of late years been unfortunately much neglected; for in one place where you will find a well grown specimen, in twenty you will get them more like Broom bushes than properly managed plants. I therefore beg to offer a few remarks on the mode of culture which I pursue.

I start my early vinery about the 1st of January, at 45 deg. Fahr., and I place a few of my

best ripened Fuchsias in it, choosing the oldest of my plants for the purpose. I syringe them overhead morning and evening with tepid water, which I also apply to the vines. Under this treatment, in the course of a fortnight or so they begin to show symptoms of growth. I then raise my house to 50 deg., after which they push vigorously. I now take cuttings off all I can, and, having a bed made previously for their reception, I insert them in a compost of leaf-mold and silver sand, taking care to drain the pots well. I also put about half an inch of white sand on the top of the pot; this keeps the soil open around the neck of the cutting, and prevents damping off, which Fuchsia cuttings are apt to do at this season in mold alone. Supposing my cuttings to be struck now, I pot them off singly into 3-inch pots, in a mixture of leaf-mold, a little well-decomposed cow-dung and some sand, watering them sparingly. I then place them in a slight bottom-heat, where they soon make a start, and if all goes on well they will soon be six inches high, when I shift them into a 5-inch pot in a compost of rich turfy loam, rotten cow-dung, a little leaf-mold, and sand. I now bring them to the vinery, keeping them close up to the glass. They now reap the benefit of their shift, and become strong and vigorous, throwing out laterals or side shoots in abundance. About this stage I apply a small stake, to which I tie the leader very loosely. The side shoots now make rapid progress, and when they have attained the length of two or three joints, I pinch off one, leaving one or two, according to the length of the joints. In this way I double my side shoots. I now give a little weak liquid manure, made of sheep's dung, if that can be got. I give them this twice a week, which invigorates them, and makes them push fresh laterals, which I again pinch, tying the leader to the stake as it grows. By this time the pot will be pretty well filled with roots. I now give them their final shift for the season, using a 10-inch pot, and good rough compost, consisting of turfy loam and cow-dung, in equal parts, mixed with a little leaf-mold. By the beginning of August I have got pretty tolerable plants; I therefore let them come into bloom, watering liberally with manure water, and putting a slight mulching of cow-dung on the top of the pots. They will flower till the end of October or middle of November. I now have the foundation laid for specimen plants the following season. After they have done flowering, I store them in an empty pit, giving only as much water as will keep them alive till spring. Next year they get the same treatment as last, and by these means I succeed in getting plants which are the admiration of all who see them.—*B., in Gardeners' Chronicle, London.*

Impatiens Jerdoniæ.—A specimen of this new, greenhouse, herbaceous plant, exhibited by Mr. Veitch, at the last meeting of the Horticultural Society, received a Silver Knightian Medal, in testimony of its singular beauty and horticultural value. It forms a tuft of fleshy or tuberous stems, about a foot high, of a deep purple color, concealed by numerous narrow, deep-green leaves, from among the uppermost of which appear great numbers of flowers in general form like those of any other Balsam, but of a brilliant brick-red, relieved by yellow and green. The red belongs to a large, bag-shaped, curved pouch, which hangs down in front of the flower-stalk; the yellow and green, confined to the small sepals and petals, form a helmet-shaped body, which seems to terminate the pouch. The figure in the *Botanical Magazine* was taken from a very ill-colored specimen. It will no doubt propagate easily by cuttings, if not by seed, and can not fail to be a universal favorite. Mr. M'Ivor sent the tuberous stems from the Neilgherry garden, at Ootacamund, to the Royal Botanic Gardens, Kew, where it first flowered in June, 1852.—*London Gardeners' Chronicle.*

Editor's Table.

THE SEASON.—We thought, at one time, that we were going to have a spring of unprecedented earliness. On the twelfth of March the ground was pretty generally free from frost, and outdoor operations were briskly commenced. For nearly a week the weather continued as mild and beautiful as May, when, on the eighteenth, a strong gale of wind suddenly came up, and with it intense cold, which completely froze up the ground again, and put a stop to all outdoor work. The high wind and cold continued nearly three days, trying severely green-houses and hot-beds, as well as bulbous roots and other articles that had been uncovered on the expectation of spring. We do not think that the fruit buds suffered, because the warmth had scarcely been of sufficiently long continuance to excite them, nor has the cold been so intense as to do them injury in their backward condition.

THE DOWNING MONUMENT.—We have been informed that the fund now collected for this monument amounts to about *one thousand dollars*. The design is a vase of pure white marble, on a pedestal of five feet in height, the whole to be nine feet. The vase is to be elaborately carved, and the pedestal to bear a suitable inscription. It is contemplated, we believe, to place it in some of the public grounds at Washington. If the New Yorkers had succeeded in their great central park project, that would have been the place for it, we think. We would rather place it on the Boston Common than on any of the public grounds at Washington, in their present state. They might do for the monument of a soldier, but not for that of a man of such tastes as DOWNING'S.

THE PARK QUESTION IN NEW YORK.—We are indebted to SAMUEL J. GUSTIN, Esq., of Newark, N. J., for reports, documents, and proceedings relative to the New York Parks. The question is yet, we believe, undecided. Some are in favor of "Jones' Park"—a tract of ground containing 153 acres, part of it heavily wooded, lying between the Third avenue and the East River, not a great distance from the Hurlgate ferry. "Central Park," contains upwards of 700 acres, almost in the center of the island, between Sixteenth and 106th streets and the Fifth and Eighth avenues, being about half a mile wide and two and one-fourth miles long. This ground embraces the site of the new Croton reservoir, which will be in fact a lake of nearly 100 acres area; also, the State Arsenal and St. Vincent's Academy. The ground is rocky and uneven; some portions of it being elevated, and commanding a fine view of the rivers, villages, and country, that surround the island of New York. A magnificent park *might* be made on this ground; a park every way worthy the great commercial metropolis. Jones Park is recommended as being more available at present, having woods on it that may be thinned out, and afford shade and ornament at once, and at a comparatively trifling cost. Admit this; though we have little faith in the practicability of making handsome park trees of many of those now standing on Jones' woods. A few around the outsides would do very well. But what is a park of 150 acres to New York, not as she is, but as she will be five and twenty years hence? Nothing! She will want both of these parks; and, if the people of New York could appreciate the

matter, they would demand them both. Is it not economy to provide for the public health? Most surely it is; and if no provision is now made for vacant ground, where people can enjoy fresh air and healthful exercise, what will become of them by and by, when the whole island is densely occupied? Will it be possible then for such immense masses of human beings, crowded together in the midst of filthy streets and alleys, to avoid epidemic diseases? and would not one season of cholera cost more than both the talked-of parks? No large city in the world is so destitute of public grounds as New York. We hope this will not long be so.

THE CONCORD GRAPE.—This famous new Grape is one of the leading topics of the times in the horticultural world. We find various opinions in regard to it, even among the Boston gentlemen who have seen it from its first appearance. We have, during the last few weeks, received several letters on the subject. One says: "Those who purchase the *Concord* Grape, with the expectation that it will equal in size the cut that appears in the *Magazine of Horticulture*, and other papers, or in merit the terms used in the advertisement, will be greatly disappointed. The Grape, either in bunch or berry, is not by *one-third* as large as pictured; nor is the Grape generally commended here." Another says: "The best judges have never considered it more than a Grape for preserves."

Personally, we have no knowledge of the Grape whatever, and can not say a word either for or against it. We have the opinions of very respectable gentlemen, newspaper articles, and committee reports, speaking highly of its merits; while other gentlemen, of the highest standing, say that the public should be cautioned against believing in either the extraordinary size or excellence claimed for it by its friends. Mr. BULL himself, who we believe is perfectly honest in the matter, though, like other people, liable to be carried away by a partiality for his own productions, assures us that he has entire confidence that it will prove to be all that is claimed for it; and that his own neighbors are buying it, by the half dozen, at five dollars each. Mr. B. sends us the following note, in reply to a correspondent, who expressed a doubt, in our last number, as to the *Concord* ripening *four weeks* earlier than the *Isabella*.

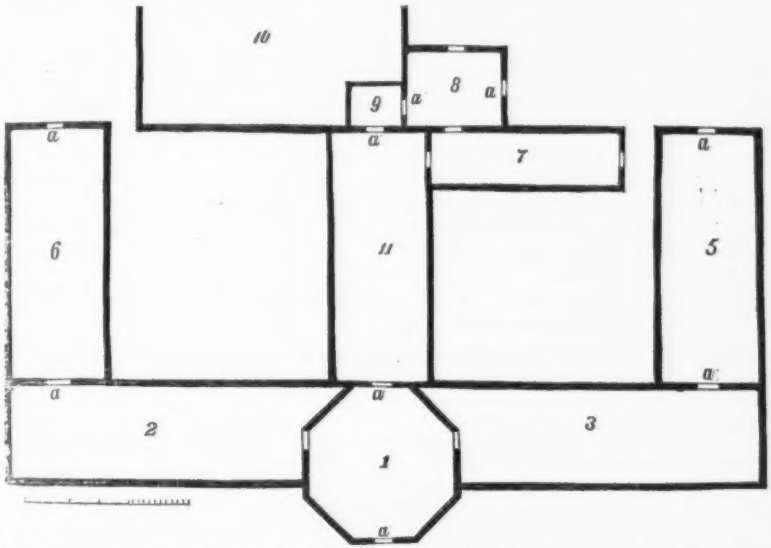
"I observe, in the March number of the *Horticulturist*, an article on the new seedling Grape *Concord*, signed JAMES LENNOX, who doubts if the *Concord* does really ripen four weeks before the *Isabella*, which, he says, ripens at Rochester about the same time the new seedling does at Concord. Will you allow me a little space to state the data upon which my statement is founded? so that your correspondent, and others, may see for themselves all the circumstances of the case, and arrive at an intelligent conclusion in regard to it.

"I have had the *Isabella*, *Diana*, *Catawba*, and many other varieties, growing in my garden for many years. The *Isabella*, *on the open trellis*, never ripened a single bunch. Five years since, I planted it against the house, in a border prepared in the best manner. In this position it does ripen its fruit, generally; but, two years since, it failed, even there. The *Catawba*, though *against the house*, never ripens; the *Diana*, in the open border, ripens, with difficulty, about the first of October. It ripens on the seaboard a few days earlier. They have all of them been well cultivated, and annually pruned. The *Concord* has grown on the open ground, where it has *never failed* to give a full crop of ripe fruit by the tenth of September; while the *Isabella*, above spoken of, gave its earliest bunches of ripe fruit October sixth, and the main crop was gathered October fifteenth, not without some red berries, even then. The *Isabella* ripens at Boston about the first of October.

"Whether the same difference in the time of ripening the *Isabella* and the *Concord* will prevail at Rochester, can only be determined when the *Concord* shall have been grown there. I can not see any good reason why the *Concord* should not be as much earlier than the *Isabella* at Rochester as it is at Concord. E. W. BULL.—*Concord, Mass.*"

GREEN HOUSES OF JOHN B. EATON & Co., OAKLANDS NURSERY, BUFFALO, N. Y.—The most complete and elegant plant houses which we have seen in this country, devoted to commercial cultivation, are those of Messrs. EATON & Co., of Buffalo, formerly MASON & LOVERING. Every convenience in the way of heat, water, ventilation, &c., has been provided as perfectly as it was possible, without any regard to the expense. They are finely situated on one of the highest localities, near Buffalo, and adjoining a large and costly residence, which Mr. MASON has nearly completed for himself.

The plants are young—the houses having been completed last fall—but all are in a fine, healthy condition, and arranged with great care and taste. We were so much pleased with these houses that we requested Mr. EATON, who is the managing partner, to give us a diagram and description of them, which he has very kindly done, as follows:



1, *Conservatory*—octagon, 30 feet in diameter, occupied by a bed of prepared soil; in the center, a rockery, and shelves extending around the house next the glass. Between the shelving and border is a broad walk, paved with marble.

2, *Rose-House*—20 by 60 feet, furnished with a stage and front shelf; below the stage is an excavation, used for storing Dahlias, etc., and behind it a pit, level with the ground, in which are plants of large size; at the west end is a raised border, in which are plunged Camellias, etc.

3, *Geranium-House*—20 by 60 feet dimensions, and arrangements the same as Rose-House, except that the raised border at the end is replaced by a shelf.

5, *Forcing-House*—20 by 50 feet. Pit in center, two feet high, heated below. Shelf each side of the house.

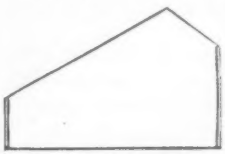
6, *Grape-House*—20 by 50 feet; border inside, occupying the whole house; at the back it is raised, and at present filled with Camellias plunged in the soil. Grapes but recently planted, and as yet only on the front.

7, *Propagating-House*—between Hot and Forcing-Houses, 12 by 40 feet; a heated pit on each side; pathway sunk between them.

11, *Hot-House*—opening from Office, 20 by 50 feet; center occupied by a walled pit two feet high, surrounded by a walk, with shelves on the sides next the glass.

8, *Office.* 9, *Entrance.* 10, *Dwelling-House.* *a, a, a,* Doors. The open space on each side of Hot-House is used for frames. The front is 150 feet.

The Rose, Geranium and Grape-Houses, are constructed with "three-quarter span" roofs, as in the annexed figure, and back walls of hollow brickwork. The two former have a southern, and the latter an eastern aspect. The *short* span being behind the stages, and directly over the pits in the rear of them, give an abundance of light to plants placed in them.



The *Forcing and Hot-Houses* are both span-roofed, running nearly north and south.

Roof-sashes all stationary, with ventilators placed at the ridge and below the front sashes, which also open. Partitions between houses are glass. The whole range is heated by a powerful hot-water apparatus, erected by JOSEPH NASON, of New York; the pipes of which are from four to six inches in diameter, and measure nearly 3,000 feet in length. They are all heated by one furnace, situated in the basement of the office building; and which is capable of warming a still greater extent of surface, if required. In the same basement is a powerful steam pump, which elevates the water for the supply of the houses, from capacious cisterns and a deep well adjacent (as hard or soft water is required), into two reservoirs, containing nearly 600 gallons each, located in the attic, whence it is conveyed in pipes to all parts of the green-houses, wherever needed; also to the stables, &c., hydrants are placed at convenient distances, to which hose may be attached, as may also be done with the steam pump, which thus becomes a fire engine of considerable power."

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"I regard our conversational meetings as more important than our public exhibitions; indeed no Horticultural Society, in my opinion, is in the straight path of duty until it has established meetings of this kind. It is impossible for a dozen practical men to meet together, and relate their experience, without being mutually benefited; unless they should all be fools, which it would not be charitable to suppose. I would urge you to recommend the holding of such meetings in every section of the country."

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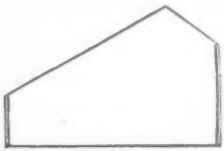

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Mr. Longworth's Experiments with the Clinton Grape.—Thinking that the readers of the *Horticulturist* would like to hear what Mr. Longworth thinks of the *Clinton* Grape, I venture to transfer the following for your columns, from his letter to me of the first of February. J. H. Watts—*Rochester, N. Y.*

"I believe I advised you that the must and wine of the *Clinton* Grape differed from any I have ever seen. The must weighs very heavy, indicating a large quantity of saccharine matter—the wine, fully fermented, acid, and weighing but little, and indicating but little spirit. Of the Grapes you sent last spring, I made two kinds of wine. One part I pressed as soon as worked, and put at the rate of seventeen ounces of sugar to the gallon of must; the other, I worked, and left to ferment in the skins, before pressing, and put no sugar. The first is of a beautiful dark-red, which I have never seen equalled in color, and very clear. It has no sweetness, and is rather dry, but of fine flavor. The other is clear, very dark-red, and more acid, but of fine flavor. I deem that in our warmer latitude, the must will have more sugar, and will make a valuable red wine—an article we have not at present. I am very desirous of giving the Grape further trial, and shall esteem it a favor if you will engage and send me from two to five bushels of the Grapes, and let them be as ripe as possible. I shall also be pleased to get from two thousand to five thousand cuttings. I will next spring graft a dozen roots with this Grape, and the next season guarantee to have Grapes enough fully to test how they suit our climate—as I have had grafts grow the first season from ten to thirty feet, and often to bear some fruit the same season."

Note on the probable effect of Sweepings of Blacksmiths' Shops and Charcoal on Fruit Trees, &c. &c.—I notice in the January number of the *Horticulturist*, a communication from R. B. Warren, in which he says:

"In preparing the ground for setting them" (Pear trees), "I put into the holes a half bushel of the sweepings of a blacksmith's shop, mixed with cinders and ashes from the forge," &c. "I have two very fine trees, five years old, which have never produced half a dozen Pears; they bloom profusely every year, but set no fruit." The sweepings and cinders from a blacksmith's shop would probably have the same effect on trees as charcoal. My wife scatters pulverized charcoal over the earth around her house-plants, which causes them to bloom very profusely, and the flowers to assume much brighter colors than they usually wear.

We tried the experiment on our Cucumber vines; they blossomed a fortnight earlier than the others; in fact the vines were completely covered with flowers, but no Cucumbers were produced. I tried the same experiment on an Apple tree; it blossomed a week earlier than any other tree in the orchard, but did not bear a single Apple.

A moderate use of charcoal, or sweepings and cinders from iron workers' shops, *may* be beneficial to garden vegetables and fruit trees, though my experiments have not been extensive enough to satisfy me whether they may be successfully applied or not. H. L. Spencer—*Castleton, Vt.*

Note on the Green Sweeting Apple.—What a luxury, Mr. Barry, we have in this fresh and delicious Apple? I believe we have each tried its merits in the supply from Robert H. Brown's orchard. Possessing a very mild and agreeable sweet, and being very juicy, it gives a healthy tone to digestion, and can be eaten with impunity. I wish no other beverage than its juices to quench thirst, and no better dessert at all times. The tree produces abundantly; and my object is to call attention to it, that every cultivator of trees may be sure and have it. The Apple is in perfection now, and will keep a month longer. J. H. Watts—*Rochester.*

We consider this the best Sweet Apple *for dessert* that we grow in this locality; always fair, and of a handsome pea-green color, rarely with a blush on one side. The tree is a good grower and bearer.

A CORRESPONDENT writes as follows from Lawrence county, Ohio:

"The *Rome Beauty* Apple was originated near this place, on the river bottom. It grows to an enormous size; ninety-six will fill a barrel easily. Those grown on the upland are the best flavored, and of fine size and appearance.

"There is a yellow Peach here, called the *Italian*, nearly as large as the above Apple, and of fine flavor. It was raised from a stone brought from Italy.

"With the exception of the above named fruits, there is but little in this country worthy the name of fruit.

"I asked a man what kind of Grape vine that was in his garden? He said, *Tame Grape*—tame enough, indeed—on the ground. What kind of Gooseberry is that? *Tame.* What kind of Plum is that? *English.*"

PEARS.—As some of your subscribers have sent in an account of the keeping of their Pears, I would inform you, though I have but few, that I ate my last *Beurre Diel* the first week in January; and yesterday (February 27) my last *Beurre d' Aremberg.* My *Easter Beurre* will, I think, keep till next May, as I have kept them that long heretofore. JACOB FRANTZ—*Paradise, Pa.*

TO THE VICTIM OF HAPPY CONTENTMENT.*—*Dear Atticus*—And you are too contented in a home where beauty and taste are so perfected as to leave little room for devising and improving? I do not wonder; for are we not all happiest when intellect and heart are taxed to their utmost in inventing, and the physical system correspondingly so in executing darling plans and theories? "We were not made to wander on the wing." 'Tis in creating that we live most intensely. That were a sordid soul—a dull, phlegmatic creature, devoid the actuatings of genius and talent—who could rest quietly in his perfected home, and bask in the sunshine of its beauty—revel sensually in the adornments clustered about him. He would be a voluptuous animal, despite his prating of art and taste.

Your state, sir, is a dangerous, a critical one. Your disease has more fearful tendencies, I fear, than you realize. Look well to yourself before it advances beyond your control. I have had great faith in Mr. BARRY's judgment: but the best of people err sometimes. As you value your well-being, I pray you do not hug to yourself the vain thought that the "*summum bonum* of happiness and contentment you have reached!" Lay not the flattering sweet unction to your soul! That was a syren song that breathed through the editorial quill just then; heed it not! or it will lull you into a dangerous slumber, from which you will awaken to an incurable sense of unrest and discontent. My womanly nature is stirred for you; I tremble lest you may yield to delusive charms, and I long to snatch you from ruin's brink.

Your confessions and your aspirations after knowledge to show you your true state has interested me, though I know you not from any other Greek. But I claim you as a brother. With such a mind and its capacities for conceiving and constructing—for weaving bright dreams into brighter realities—you will not be satisfied even when all within your reach seems attained. You must still be creating new fancies, and laboring to endow with form those imaginings. You can never become a quiet, contented clod.

Like a good friend, I do as I would be done by, and bring you proposals of relief. First, pray, sir, allow me to be a little egotistical, and tell you somewhat of myself.

Most of my life was spent in a great city, amid its high walls, its crowded streets, and ceaseless din; but I was ever longing to be away, where sight and thought could be free—to enjoy those beauties which methought I loved with a stronger passion than the hum-drum common-place people about me. I did not get the better of my romantic dreams even when married and *settled down*, for I took care to get a husband that loved what I loved, and not one whose whole soul

* Our readers will remember an article, published in the December number, from friend "ATTICUS," who considered himself "too contented at home." It has called out a beautiful reply from "ELSIE."—ED.

was in his money drawer and ledgers, and who would by his lack of sympathy smother up my little bit of fancy. And so the first lispings of our little ones were of things we had taught them to love. We gave them all the lessons on nature we could; and when the reality was not at hand, made use of those next best things, descriptions and picturings of her works. And so at three years old they knew more of nature than many who live all their lives amid her haunts. Our sweet morning naps about four o'clock were disturbed by one or two cherubs climbing up and nestling beside us with—"Now, papa, mamma, talk 'bout our farm;" or, "talk poetry."

In the course of time *our farm* was no idle figment of the brain, but a living, broad reality. And such a farm!—just what a poetical, romantic woman might crave. It was as the red man left it, in all its pristine beauty. What happiness to possess those broad acres unmarred by the hands of verdant, uncultivated rusticity, with their obsolete notions! What pleasure to apportion and adorn it to our own minds! We erected a settler's cottage away back from the road, and left a choice spot for our future home. Three years have rapidly flown in this delectable employment. Orchards and gardens and nurseries and fields have stretched themselves out *as by magic*, say those who have not been witness to the sinewy strength and the sweating brow that have overcome difficulties and produced results; and one who possessed a little corner of romance in her composition, which attracted me instinctively, likens it to the wonders of ALADDIN's lamp. Dear ALADDIN, your lamp must have burned slowly if it revealed not things with greater celerity than do we with axes and bush-scythes and plows and spades. But could you eat of the delicious Apples and Pears (thanks to the dwarfing system) and Plums and Cherries and Grapes and berries already here produced in the excellence of their most approved varieties, you would deem it something more than a dream. During this time we have been so intensely occupied in bringing about necessary improvements, that we have neither time nor means to devote to beauty. We live on hope—hope. At even we sit by the home fire, and talk of what we may sometime have and enjoy, as we picture our future home. We rest in sleep, and dream we are enjoying these comforts in full fruition; we rise in the morning, and the early dawn reveals a humble home, with stumps and rail fences all around. Then we go to work with fresh vigor—another home in our eye encouraging us onward. Just such things as you talk about *possessing*, we plan—and enjoy, day after day, in *anticipation*. But we don't waste time in idle dreaming,—oh, no; we work away, early and late—"still pursuing, still achieving:" and we *have* "learned to labor and to wait."

Some people might think there were inconveniences, discomforts, and trials, attending this life—such as living in a settler's home with not very extensive accommodations, and the brusque appearance of the grounds immediately surrounding—the very part that comes oftenest in contact with the visual organs of *we* whose *sphere* of duty doesn't compass many acres. Time does not permit us to arrange this spot, which we only look at as a temporary locality; for the sternly useful and actually necessary are all the time pressing—pressing. They who would think thus might fraternize with that sordid class with whom I have proven you, sir, could never affiliate. For here, hope, imagination, anticipation, and invention, with execution, may be brought into active exercise. And are they not among our highest attributes—productive of some of our purest pleasures?

While I busied myself this eve, inserting ingenious patches in the knees and elbows of sundry juvenile garments, husband read me the *Horticulturist;* and among other things, your article. So absorbed was I in the repairing of dilapidated wardrobes, that at the time I did not enter into the full spirit of it. My agrestical occupation seemed to earth-bind my fancy. By-and-by husband, who was unusually tired and sleepy, had sought his pillow; and while I went from room to room, tucking in the inmates of the different beds, he was fairly napping. I sat down by our low window, to indulge a little ruminating. Without was spread a scene of varied *natural* beauty, and all about was bathed in moonlight of true western brilliance. With the speed of thought I sought that fair Attical home, and reveled in its classic beauty. Then I plumed my

wings, and backward flew, home again. How very, very humble! A twinge so slight, and yet so keen as to almost start a tear, marked the *change* in the spirit of my dream. Oh dear! when will our home be all of this? When I might enjoy it so exquisitely, why can't I have it *now*? Thou spirit of impatience,—come here to disturb my amiable equanimity—to get the better of my philosophy and my contentment,—begone! That Athenian, with all his surroundings, is not to be envied. I'll warrant there might be some "internal care" sometimes "written on his brow," as on mine this moment; but on my brow it never has rested, and it shall not now. I seized my lamp, slipped softly down stairs and brightened the fire, exclaiming—"I'll write him a letter this moment, and ask him if he dare be so audacious as to assert himself half as happy and contented as we of this Woodside cottage?" Just here my benevolence and kindness were aroused as I thought of Atticus stricken with a dangerous malady, and my heart and mind were taxed for ingenious contrivances for his relief. The bright thought soon came; and I revolved it over and over, till I came to think it vastly sage. But though I know your anxious curiosity is all on the *qui vive*, you must have patience; for the unfolding even of my simple plan will require another letter. Yours in the bonds of sympathy, Elsie.—*Woodside, Waukesha, Wis.*

The Alpine Heights.—The pen and the pencil may attempt, and not unsuccessfully, to reproduce the soft gradations of the beautiful or the abrupt contrasts of the picturesque; but they are alike powerless and paralyzed before the awful grandeur of the Alpine heights, where there is neither life nor motion; where a stern, unsmiling sublimity has moulded every form, and stamped upon the scene the frown of a perpetual winter. There is nothing in the ordinary aspect of nature that prepares us for what we see when we have entered the region of perpetual snow. Here is no hum of insects, no rustle of foliage, no pulse of vitality. There is no provision for animal life in the pitiless granite, ice, and snow, that make up the landscape. The solitary eagle, whose slow circling form is painted on the dark sky above, seems but a momentary presence, like ourselves, and not a part of the scene. Nature is no longer a bounteous and beneficent mother, but a stern and awful power, before which we bow and tremble; and the earth ceases to be a man's farm and garden, and becomes only a part of the solar system.—*Hillard's Italy.*

Answers to Correspondents.

(T. B., Trumansburgh, N. Y.) Pears for Profitable Orchard Culture.—*Bartlett, Virgalieu* or *White Doyenne, Gray Doyenne, Louise Bonne de Jersey, Flemish Beauty, Swan's Orange, Glout Morceau, Vicar of Winkfield, Lawrence,* and *Easter Beurre.* For two varieties only, we recommend the two first. For a profitable orchard on Quince stocks, *White Doyenne, Beurre Diel, Duchesse d'Angouleme, Louise Bonne de Jersey, Glout Morceau, Vicar of Winkfield, Cattillac,* and *Pound.* For three varieties only, *Louise Bonne de Jersey, White Doyenne,* and *Vicar of Winkfield.*

Blight.—We cannot say that any varieties are free from attacks of this malady, or that any are less liable to it than others, though circumstances occasionally favor that belief. As a general thing, it is less fatal to slow-growing trees and varieties than to those of very rapid and rank growth.

(C. M. G., Upper Lisle, Broome county, N. Y.) New Varieties of Flowers.—These are produced in two ways: first, accidental sports and variations, which, in some cases, are permanent; and, second, by cross impregnation. New varieties of Tulips, Hyacinths, Daffodils, Dahlias, Fuchsias, Geraniums, Verbenas, &c., are all raised from seeds. Thousands of seedling Dahlias may be grown and flowered, without obtaining even one fine double flower worth saving; the same may be said of all the others.

Oranges will bear without being grafted or budded, but not until well advanced in age, and the fruit may be worthless.

The LILY is the *Hemerocallis* (*Funkia*) *Japonica*, or Japan Day Lily—a hardy plant for the garden.

ROSE—Probably the *Queen of the Prairie*. We can tell you if you send us a flower, with a small piece of the wood and a few leaves.

"TO HAVE ROSES BLOSSOM THROUGH THE SUMMER AND FALL," you must plant ever-blooming sorts, such as *Hybrid Perpetuals, Bourbons, Noisettes*, &c.

(Several Inquirers.) AMERICAN POMOLOGICAL SOCIETY.—The time has not been fixed, but we will no doubt be able to answer it in our next. We hope it will be so arranged, if possible, that members can attend the exhibition of the Massachusetts Horticultural Society without loss of time. So many exhibitions are held at that season that it will be impossible to avoid collision with some of them.

I NOTICED, in a late number of the *Horticulturist*, an article on the Peach, wherein the *Hard-Shelled* Almond was recommended for a stock. Can you inform me where the *Hard-Shelled* Almond can be procured in any considerable quantity, and in a suitable condition to plant? (those found usually in the market are probably too dry to vegetate) and if trees put upon this stock are equally liable to be attacked by the "yellows?"—a malady which has been the destruction of most of the Peach orchards in the vicinity of Boston. A gentleman, who is one of the proprietors of one of the most extensive nurseries in the interior of New York, had the kindness to send me a quantity of Peach stones to plant, with a view to disprove the idea that I entertained, that the disease was *local*—i. e. that *all* Peach trees on Peach stocks were subject to it in this vicinity, whether they were, previous to being planted, healthy or otherwise—but these have been equally sickly with those grown from stones gathered promiscuously in the Boston market, notwithstanding they were procured from a section where the disease did not prevail.

I noticed an article in your January number upon the cultivation of the Rhubarb, or Pie Plant. Having seen it grown in some nurseries from seed, with a view of improving its size, it should be known that these seedlings differ widely in their effects. One of the most eminent horticulturists in the vicinity of Boston, who has grown multitudes from seed, informs me that some of his seedlings operate as violent emetics on all who make use of them, and others as cathartics; and, in one instance, he was credibly informed of a large number of people who were taken with the disease generally known as gravel, occasioned by the use of a particular variety of Rhubarb for only a few weeks. (2)

Can you inform me by what mode the New American Weeping Willow is most successfully grafted? and if any particular variety of stock is preferable? (3) C. W. P.—*Newton.*

(1) The Hard-Shell Almond bears abundantly in many parts of the country, and seeds or "pits" could be easily obtained in the fall; or you can import the seed or stocks from France. We cannot say that this will prevent the "yellows." We fear not; but it is well enough to try.

(2) We have not heard of such cases before. In selecting plants to be reserved, from seedling Rhubarb, the largest and finest flavored only should be chosen. There is as much difference in the tenderness and flavor of Rhubarb as of Apples.

(3) Graft on any strong, erect Willow, in the usual "cleft" manner.

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And, *finally*, (I fear you will suspect my profession), will you, when it shall be convenient, give, in the *Horticulturist*, a design for a neat, quiet, country inn, such as may be suited for a rural village, not subject to the arrival of many strangers, but needing, occasionally, accommodations for the comfortable, hospitable entertainment of a "sojourner for a night or day"—a pleasant, home-like place, that shall have no taint of the "vile Virginia weed," and no dark, lurking place for *evil "spirits!"* W.—*Shrewsbury, Mass.*

(1) There are grounds which, generally, are quite dry; but from their adhesiveness, or from the impenetrability of the sub-soil, water is not permitted to pass off rapidly. Such soils need draining, and a loosening of the sub-soil, to make them suitable for fruit trees. To see water accumulate on the surface is a sure sign of wetness. If any part of your garden be lower than the rest, make a drain there large enough to contain the surplus water, unless there be a natural outlet. This large drain may be four feet wide and six feet deep, if necessary; fill it with stones, of small size, to within two feet of the surface; lay some straw, brush or rubbish, over them, or some sods, grassy side downwards, and cover with earth. Into this large drain smaller ones may be conducted, having just fall enough to let the water run. We usually make stone drains two feet wide at the top, eighteen inches at the bottom, and three and a half feet deep; fill them with small stones, as described for the larger ones. In a flat, moist garden, stone drains are useful, even if there be no outlet, as a drain in the middle of a walk is sure to keep it perfectly dry in all states of the weather.

(2) This will serve as drainage to some extent. When difficulty is apprehended from water it is a good plan to raise the bed, so as to have the ground descend from it.

(3) None that we know of.

We must defer the questions concerning "chimney caps" and "thatched roofs" to some of our correspondents who have had more experience in the matters than we.

Perhaps our friend Davis will give us a design, soon, for a "neat, quiet, country inn."

I purchased, two years ago, a number of Pear trees, grafted five feet from the ground; and have been troubled with a kind of wart that has appeared upon the part where the graft was inserted. I fear that the growth of the trees will be checked. Please tell me what is to be done. A Subscriber.

The growth of these "warts" is owing to the interruption of the circulating fluids at that point. They may be a greater deformity than an injury. You might pare them off with a sharp knife, down to a level with the natural bark; not all around the tree at one time, so as to "girdle" it, but gradually.

Notices of Books, Pamphlets, &c.

Second Festival of the Sons of New Hampshire. Celebrated in Boston, Nov. 2, 1853.

The proceedings at this Festival, and an account of the proceedings in Boston on the day of the funeral at Marshfield, and the subsequent obsequies commemorative of the death of Daniel Webster, have been published in a beautiful volume. This association numbers among its members many of the most eminent men in the nation, of all professions. Daniel Webster was their first President, and he has been succeeded by Marshall P. Wilder. The speeches, poems, and sentiments, as may be supposed, are of the highest order. New Hampshire has here something to be proud of. We should say the book contains excellent portraits of Daniel Webster, Marshall P. Wilder, Samuel Appleton, and the late Jonas Chickering. The following happy allusion to one who has done much, and who we trust will live to do much more, for American horticulture, will be read with interest:

"Our principal theme of discourse here to-night, Mr. President, is New Hampshire and her sons. When I look over this spacious hall, and behold it filled with men brought up in, and brought out from, the lowly hamlets on and about our hills, and scan the course, as illustrated in the paintings on your walls, of the career of the New Hampshire boy, I feel assured, sir, as says

The Lily is the *Hemerocallis* (*Funkia*) *Japonica*, or Japan Day Lily—a hardy plant for the garden.

Rose—Probably the *Queen of the Prairie*. We can tell you if you send us a flower, with a small piece of the wood and a few leaves.

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And, one thing more. Will you, soon, describe the process of *thatching;* how a roof is to be prepared for it, and how straw, or any other proper material, is to be applied?

And, *finally*, (I fear you will suspect my profession), will you, when it shall be convenient, give, in the *Horticulturist*, a design for a neat, quiet, country inn, such as may be suited for a rural village, not subject to the arrival of many strangers, but needing, occasionally, accommodations for the comfortable, hospitable entertainment of a "sojourner for a night or day"—a pleasant, home-like place, that shall have no taint of the "vile Virginia weed," and no dark, lurking place for *evil "spirits!"* W.—*Shrewsbury, Mass.*

(1) There are grounds which, generally, are quite dry; but from their adhesiveness, or from the impenetrability of the sub-soil, water is not permitted to pass off rapidly. Such soils need draining, and a loosening of the sub-soil, to make them suitable for fruit trees. To see water accumulate on the surface is a sure sign of wetness. If any part of your garden be lower than the rest, make a drain there large enough to contain the surplus water, unless there be a natural outlet. This large drain may be four feet wide and six feet deep, if necessary; fill it with stones, of small size, to within two feet of the surface; lay some straw, brush or rubbish, over them, or some sods, grassy side downwards, and cover with earth. Into this large drain smaller ones may be conducted, having just fall enough to let the water run. We usually make stone drains two feet wide at the top, eighteen inches at the bottom, and three and a half feet deep; fill them with small stones, as described for the larger ones. In a flat, moist garden, stone drains are useful, even if there be no outlet, as a drain in the middle of a walk is sure to keep it perfectly dry in all states of the weather.

(2) This will serve as drainage to some extent. When difficulty is apprehended from water it is a good plan to raise the bed, so as to have the ground descend from it.

(3) None that we know of.

We must defer the questions concerning "chimney caps" and "thatched roofs" to some of our correspondents who have had more experience in the matters than we.

Perhaps our friend Davis will give us a design, soon, for a "neat, quiet, country inn."

I purchased, two years ago, a number of Pear trees, grafted five feet from the ground; and have been troubled with a kind of wart that has appeared upon the part where the graft was inserted. I fear that the growth of the trees will be checked. Please tell me what is to be done. A Subscriber.

The growth of these "warts" is owing to the interruption of the circulating fluids at that point. They may be a greater deformity than an injury. You might pare them off with a sharp knife, down to a level with the natural bark; not all around the tree at one time, so as to "girdle" it, but gradually.

Notices of Books, Pamphlets, &c.

Second Festival of the Sons of New Hampshire. Celebrated in Boston, Nov. 2, 1853.

The proceedings at this Festival, and an account of the proceedings in Boston on the day of the funeral at Marshfield, and the subsequent obsequies commemorative of the death of Daniel Webster, have been published in a beautiful volume. This association numbers among its members many of the most eminent men in the nation, of all professions. Daniel Webster was their first President, and he has been succeeded by Marshall P. Wilder. The speeches, poems, and sentiments, as may be supposed, are of the highest order. New Hampshire has here something to be proud of. We should say the book contains excellent portraits of Daniel Webster, Marshall P. Wilder, Samuel Appleton, and the late Jonas Chickering. The following happy allusion to one who has done much, and who we trust will live to do much more, for American horticulture, will be read with interest:

"Our principal theme of discourse here to-night, Mr. President, is New Hampshire and her sons. When I look over this spacious hall, and behold it filled with men brought up in, and brought out from, the lowly hamlets on and about our hills, and scan the course, as illustrated in the paintings on your walls, of the career of the New Hampshire boy, I feel assured, sir, as says

one of your mottos—"New Hampshire has a man for any place," and that every where there is a place for him and that he will find it—and shine in it! For instance, sir, take a *wild* New Hampshire boy, it may be from Rindge. Trace him in his course to the City of Notions, and he soon becomes *Wilder* in useful and prosperous business. Intelligent and influential, you find him presiding in the Senate. Public spirited and a lover of rural art, he is President of the Massachusetts Horticultural Society, taking the lead in all improvements of agriculture and horticulture, with his highly cultivated fields, hundreds of specimens of the choicest fruits, and delightful flowers in profusion. In a *Wilder* flight, he is seen as the presiding genius of the National Pomological Society, with his four hundred varieties of Pears in congress assembled. And still winging his way upward, he is found at the head of the United States Agricultural Society, in the exhibition of five hundred of the finest horses, four thousand beautiful women, and twenty thousand first-rate men! And now, here, we find him leading the van in the Festival gathering of fifteen hundred sons of New Hampshire whom he delights to honor, and they to honor him. Here he is, yet WILDER, and ever will be, till time shall put a stop to his career in his flights of usefulness, honor, and renown! [Great applause.]"

Every man born in the Granite State, where ever fate or fortune may have placed him, should have one of these books on his table.

METEOROLOGICAL JOURNAL, FOR THE YEAR 1853. By T. S. PARVIN. Muscatine, Iowa.

WE have received a copy of this journal, and extract from it the following miscellaneous remarks:

Lowest temperature, Feb. 8th, —11°; highest, Aug. 11th, 92°. Range of temperature, 103°.

Lowest height of barometer, Feb. 28th, 28.36 inches. Thermometer (attached) 38° Greatest height of barometer, Nov. 24th, 30.00 inches. Thermometer (attached) 42°. Range of barometer, 1.64 inches. Mean height, 29.577 inches.

Mississippi opened Feb. 25th. Number of days closed, 69—one less than in 1852.

Last frost in the spring, May 25th; first in the fall, September 10th.

Peach flowered May 3d; Cherry, May 1st; Apple, May 8th; Plum, May 3d; Pear, May 6th.

Total quantity of rain in inches, 43.3—15.4 inches less than in 1852.

April.—River very low until the last of this month. Heavy rains set in on the 11th, and from 2.5 to 3.5 inches fell on three occasions in twelve hours, and 11.8 inches during the month.

September.—On the 18th, between 2 and 4 o'clock A. M., 3.5 inches water fell.

October.—Ice on the 2d of this month.

Fruit of all kinds in abundance this year, and an abundant harvest. More sickness, but less fatality, this summer than usual.

FIRST ANNUAL REPORT OF THE SECRETARY OF THE MASSACHUSETTS BOARD OF AGRICULTURE.

A VERY full and instructive report. We find two or three articles which we shall make some extracts from soon. These are, "Fruit," "Woodland," and "The Climate of New England.

Horticultural Societies.

HORTICULTURE AT THE FARMERS' CLUB OF THE AMERICAN INSTITUTE.—The Farmers' Club of the American Institute is "before the public" as a valuable and influential body, laboring for the improvement of Agricultural science and practice; falling back for reputation and resources on the Institute itself—not very popular with the friends of progress. Yet, at the meetings of the club, there are frequently very important topics discussed, very humorous statements made, and a *little*

sound knowledge disseminated. The entire field of science is covered by the various questions proposed, with what success it is not our province here to say.

At the meeting on February 7th, a very important subject was on the paper for discussion—"*The Embellishments of Farms and Gardens.*" Wm. Lawton, of New Rochelle, Westchester county, was in the Chair. Few of the gentlemen present felt disposed to enter on the subject of the day; and, at the request of the Secretary, R. R. Scott offered the following observations:

"R. R. Scott—The subject is not so unimportant as may at first sight appear; and, if considered in an extended sense, is worthy of more attention than some of the gentlemen present accord to it. Embellishments may be considered in two classes; those which, while they afford ornament, are also remunerative, or at least of some utility. Ornamental farm buildings may be considered as embellishments, while they may be more convenient than those constructed without ornate character. A very important point may be gained by embellishing the farm. Those persons accustomed to city life, and opposed to living in rural residences, may be induced by degrees to take an interest in agriculture, tending to draw more capital into this most healthy and remunerative of all occupations. As to the embellishment of the garden; the garden, properly laid out, is itself an embellishment as a whole, but if the proper taste is not displayed, and the various objects thrown together confusedly, it ceases to be so. It would appear presumptuous in me to occupy the Club when others, much more experienced, have declined to open the subject. My purpose was to show that economy and embellishment might be united to a certain extent.

Professor Mapes—I concur in the remark of Mr. Scott respecting the importance of the subject, and only regret I am not sufficiently conversant with the details to discuss it. I am not prepared to dictate to men of taste in the ornamental department of the farm and garden. The shape of trees itself is an important matter; for beauty in them, as in all other races of vegetables and animals, is spoiled by want of arrangement. The pruning-knife must be used to regulate them, but with skill, and other equally important matters attended to. The eye readily detects the departure from the line of beauty; and the interspersing of trees, of varied outline and figure, adds variety to the landscape. No man should make his approaches by straight lines. The curved line is by all admitted to be the proper one in such cases; the letter S is a good example. The genius of Downing was equal to this task, and McNamara's system of clumping is very appropriate. The arrangement of colors must be kept in view; how would a lady look whose head was of a color not in accordance with the remaining portions of her dress? A red headdress, yellow body, and blue skirt, would appear to be but three distinct pieces of a woman.

The Chair made some very good observations on the importance of planting valuable ornamental trees; such as Black Walnut, Butternut, English Walnut, Elm, Beech (Purple and Copper), Ash, and a variety of choice hardy shrubs. Cedars are very ornamental. A very fine specimen of the Cedar of Lebanon may be seen at the residence of Mr. Ash, Throgs Neck, Westchester county; it is seventy years old. Trees grow while men sleep, and are gradually increasing in value.

R. G. Pardee—I feel a little the importance of this subject, but am sorry that I have been late in coming in. Planting of trees is but little attended to; not so much as it should be. One difficulty is that many do not know how to commence, or how to plant a tree; and must employ others who have a knowledge of the operation. One great means to remove this want, is the reading of horticultural periodicals. The *Horticulturist*, for instance, when in the hands of Mr. Downing—and indeed, now, under the management of Mr. Barry—has effected much, and is decidedly the most useful work of its kind in the country. Much information may be obtained by conversation and intercourse with such men. Visit the different places, and observe the treatment adopted by men of experience and taste. Removing and transplanting large trees is little understood by most men; all it requires is a little skill and expense.

Mr. Pardee went on at length to show the advantage of arboriculture.

A gentleman introduced the Magnolia as a good subject for conversation; and requested information as to the Swamp Magnolia, which he obtained from Messrs. Mapes, Lodge, Lawton, and others.

Mr. Lawton had a plant sent to him by Messrs. Parsons, as *Magnolia grandiflora*, which had proved quite hardy.

Mr. Lodge doubted that it was *grandiflora*, as that is an evergreen, and should not lose its leaves in a suitable climate. Many shrubs and plants are more hardy than is supposed; my Camellias stand well during the winter, and will flower at a temperature of 34° to 36° Fahrenheit, if sheltered. In reply to several gentlemen, Mr. L. stated that his plants were young, and had not yet bloomed out doors.

The Chair urged the importance of planting at a good distance, as trees grow rapidly and became too close in a few years; take space enough at the beginning.

Prof. Mapes alluded to the peculiarity of the Magnolia seeds; they hang from the seed vessel by a cord, and in moist weather fall, burying themselves in the soil. He tried to bury them by throwing them with force on the ground, but did not succeed.

The Chair introduced the Grevillii, Lady Greville's Rose, or the Seven Sisters, as it is commonly called. He entered into a minute and somewhat exaggerated description of its claims to attention, and recommended it to all persons who were embellishing their gardens. It was sold

when first introduced at five dollars a plant. He requested some other person to furnish more particulars as to its history, &c., and called on R. R. Scott to offer his opinion.

R. R. Scott—The rose referred to is by no means rare, but may be found in most old collections where there is sufficient space for it. No choice collection would admit it. I agree, it is a very free bloomer, and may be admired by many. The last five dollar rose brought before the public was the Augusta; and, as there are very different opinions about its character, I would be glad to hear some gentlemen who have tried it and paid their money. Such matters are of importance to the unskilled amateur.

Mr. R. G. Pardee furnished some information as to its history and character. We shall reserve his remarks for another opportunity. S.

Pennsylvania Horticultural Society.—The stated meeting of this Society occurred on Tuesday evening, March 21, 1854, in the Chinese Saloon, R. Cornelius, Vice President, in the Chair.

The display on the occasion consisted of fine Azaleas, from Mr. Dundas' and Robert Buist's houses; and from the latter a collection of twelve choice specimens of green-house plants. From Mr. Cope, a few new plants, a beautiful basket of cut flowers, hand bouquets, and a dish of strawberries. A large table of culinary vegetables was shown from Thomas Meghran, gardener to W. S. Stewart, Torrisdale.

Premiums awarded were—*Azalea*, specimen plant, for the best, to John Pollock, gardener to Jas. Dundas; *Dwarf Azaleas*, three plants, for the best, to Robert Buist; collection of twelve plants, to the same; specimen plant, for the best (*Begonia Manicata*), to the same; for the second best (*Allamanda Nercifolia*), to Jerome Graff, gardener to C. Cope. A premium of $2 to Robert Buist, for a beautifully bloomed plant of *Conoclium Ianthinum*. New plants shown for the first time—A premium of $3 to Jerome Graff, for a fine plant of *Dendrobium Aggregatum*; basket of cut flowers, for the best, to the same; bouquets, pair, for the best, to the same.

The Committee called the attention of the Society particularly to the fine Camellia *Ellen*, a seedling of Mr. Mackenzie's, which received the first prize about three years ago; it is still considered a very superior flower.

The Fruit Committee awarded a special premium of $2 to Jerome Graff, gardener to C. Cope, for a dish of strawberries.

By the Committee on Vegetables—Lettuce, six heads—for the best to Thos. Meghran, gardener to W. S. Stewart; and for the best display, the same. The Committee noticed a plate of Tomatoes shown by Wm. Johns.

Votes of thanks were ordered to James Vick, Jr., for the volume of the *Horticulturist* for 1853—to Charles Downing, for *Elliott's Fruit Book*—to H. R. Noll, for his *Flora of Pennsylvania*—and to Mrs. C. Stanly for two volumes.

Members Elected—Henry Tripler; and, to *Honorary* and *Corresponding membership*, Louis Edward Berckmans (late of Belgium), Plainfield, N. J.

Horticultural Society.—We, the undersigned, do request all those engaged in Horticultural pursuits, or friendly to the promotion of Horticultural improvements, to meet at the Brainard House, in Elmira, on Wednesday, the 12th day of April, at 12 o'clock, A. M., to take into consideration, and if deemed expedient, organize a Southern Tier Horticultural Society, for the Chemung and Susquehanna Valley.

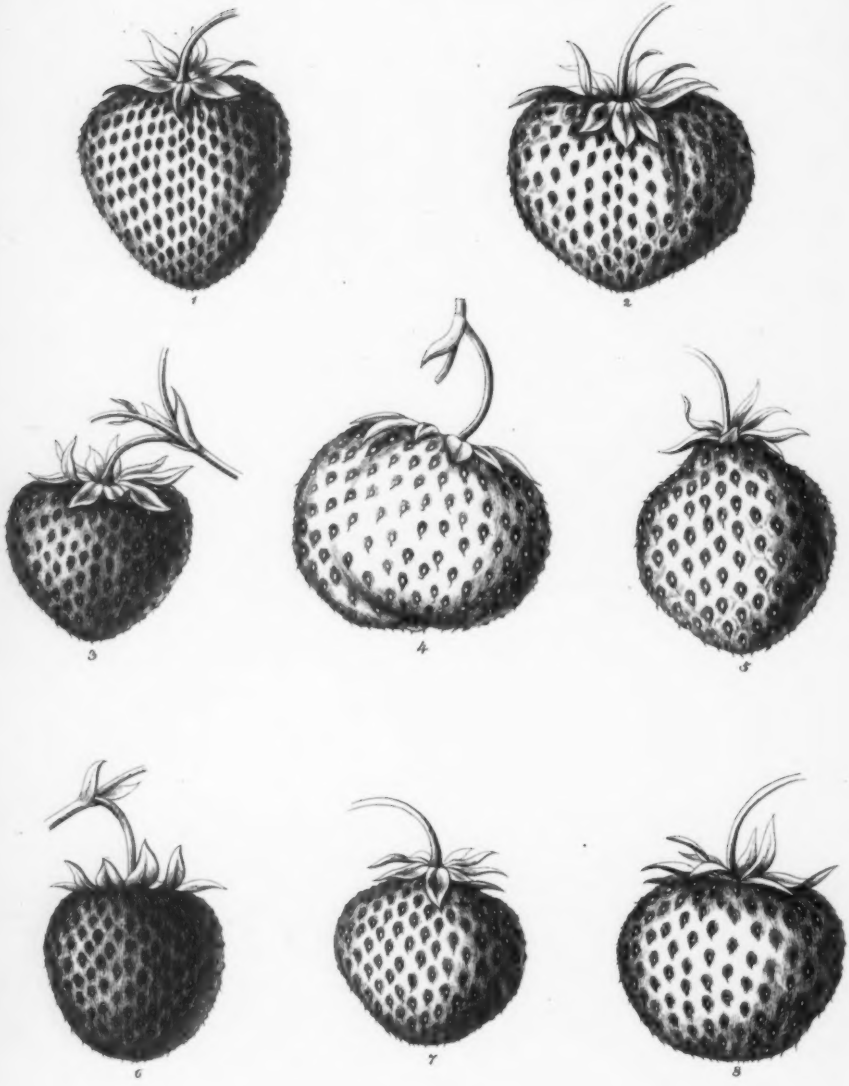
S. Fordham, Factoryville; A. I. Wynkoop, Chemung; D. S. Dickinson, Binghamton; Wm. T. Jackson, Havana; E. P. Brooks, Elmira; R. B. Van Valkenburgh, Bath; P. C. Cook, do.; Edward Howell, do.; Wm. B. McCay, do.; H. M. Seward, Elmira; S. B. Rowley, Corning; E. C. Frost, Catharine; Lucy G. Winton, Havana; Robert Covell, Jr., Elmira; L. M. Rexford, Binghamton; Robt. S. Bartlett, do.; Cyrus Strong, Jr., do.; J. L. Robinson, Wellsboro, Pa.

Chester County (Pa.) Horticultural Society.—At a late meeting of the "Chester County Horticultural Society," the following named persons were elected officers for the ensuing year:

JOHN RUTTER, Esq., *President*. James H. Ball, Esq., and Dr. Geo. Thomas, *Vice Presidents*. Josiah Hoopes, *Recording Secretary*. Jos. P. Wilson, Esq., *Corresponding Secretary*. John Marshall, *Treasurer*.

Pittsburgh Horticultural Society.—The following are the officers of this Society, for 1854:

HENRY WOODS, *President*. John Murdock, Jas. Wardrop, Rob't McKnight, *Vice Presidents*. J. S. Negley, *Recording Secretary* W. H. Williams, *Corresponding Secretary*. A. Hersperger, *Treasurer*.



1 Burr's New Pine 2 Ohio Mammoth 3 Walkers Seedling 4 Bidon Pine.
5 Genessee. 6 Black Prince. 7 Iowa. 8 Monroe Scarlet